

EXHIBIT 1

To: BRESKIN JOHNSON & TOWNSEND PLLC
1000 Second Avenue, Suite 3670
Seattle, WA 98104

From: Gregory F. Budney
22 Whig Street
Trumansburg, NY 14886

Date: October 23, 2016

Re: Review of audio files pertaining to GORDON HEMPTON v. POND5, INC.

The Work

A body of six hundred fifty-five (655) audio files of natural history content uploaded to Pond5.com, believed to have been derived from natural history audio recordings by Gordon Hempton, were provided to me for review and determine whether the files share the same content.

Conclusion

Following a review of the audio files uploaded by ckennedy342 to Pond5 and Gordon Hempton's Quiet Planet copyrighted works; it is my unequivocal conclusion that the uploaded files are copies of Gordon Hempton's copyrighted works.

Analyses

This conclusion is based upon the following analyses:

- a. *Waveform Comparison*: An audio waveform is a visualization depicting the amplitude (loudness) of an audio signal over time. Comparing waveforms is a means of demonstrating the degree of similarity between audio files with regard to the temporal sequence and amplitude of acoustic events. Reviewing Hempton's comparison of 86 paired waveforms (**Appendix B**), each pair consisting of a ckennedy342 and a Quiet Planet audio file and bearing very similar names, I find that the waveform analysis effectively demonstrates that in each pairing the ckennedy342 file is the same as the Quiet Planet file. The waveforms of the ckennedy342 file versions show the same temporal occurrence of acoustic events and the same amplitude variations as are seen in the waveforms of the corresponding Quiet Planet files. It is virtually impossible to construct the same composition of natural sounds with the same temporal and amplitude patterns without using the same audio sources, which in this case are the Hempton-owned files. Further, even if one had access to the source files, it would taken extraordinary knowledge of natural history to do so with such accuracy as is seen in these 86 comparisons.
- b. *Auditioning*: Listening to many selected files that bear the same name, identical sounds are heard at the same running-time position within the ckennedy342 and Quiet Planet files. To be clear as to what is meant by

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identical sound, it is the same unique sound produced by the same individual animal. For example, the ckennedy342 audio file 044263959-prairie-dawn-early.wav and the Quiet Planet file QP06 0567 are identical in total runtime and both contain the same common nighthawk courtship displays called “booms” at the same points in time in each recording. Booms are mechanically produced by air rushing through hair-like structures of modified flight feathers as bird dives through the air with its wings fixed. Though booms sound similar, each boom is an audibly unique event, the result of similar but varying functions of speed, the vibration of modified feather structures, and the duration of a dive as the bird moves through the air. Similarly, the audio files ckennedy342 041867579-coyote-solo and Quiet Planet file QP01 0138 Coyote solo are without question the very same vocalizations from a single individual coyote.

- c. *Phase-Cancellation Test:* Sound results from a disturbance in air molecules. Pressure waves with peaks (compressed air molecules) and troughs (corresponding areas of lower density or rarefaction) propagate spherically outward from the point of disturbance. A waveform is a representation of these periodic changes in pressure. Phase describes the position of the cycle at any point in the periodic waveform. If the pressure measurements of the peaks and troughs are inverted, then the phase of the signal is inverted. One hundred thirty-six (136) pairs of audio tracks were subjected to a phase-cancellation test. **(Appendix A.)** If two audio files are the same, when the phase of one of the files is inverted and the two files are then summed, cancellation of the audio will occur and no signal is heard, though simultaneous signal activity on the level meters indicates the presence of audio. If the two files are not the same, when summed the audio of both will remain audible.

Files were reviewed in a quiet studio environment on a digital audio workstation using Nuendo 7.1 software to view, phase invert, and playback audio files. Izotope RX 4 was used for file sample-rate conversion.

Phase-Cancellation Methodology

Test steps involved:

- 1) Listening to each file for audibility and confirmation of level meter activity,
- 2) inverting the phase of one of the two files,
- 3) summing of the two files,
- 4) playback of the summed files and observing unchanged meter level deflection and listening to the recording for audible sound.

Each pair of 136 files consisted of a ckennedy342 audio file that had been uploaded to Pond5 and a Quiet Planet audio file. Tracks shared similar name labels. The 136 ckennedy342 (hereafter “CK”) audio files, as received, were at a sampling rate of 44.1 kHz and 16-bit quantization. Quiet Planet files (hereafter “QP”) were 48 kHz and 24-bit. In order to accurately compare the

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files it was necessary to convert the CK 44.1 kHz files to a sampling rate of 48 kHz so that each pair files have the same time-based resolution of 48,000 samples or frames to represent each second of sound. This conversion was carried out with Izotope RX 4 software on a digital audio workstation. One of the two files was then phase inverted and the CK and QP files were combined. When two identical files are combined, one with phase inverted, the two files cancel one another out, leaving no or little audible audio. This procedure was performed on all 136 file pairings. Prior to combining the two files, the waveform of each file was reviewed and the separate files auditioned to make certain each file played correctly and to confirm that the audio sounded the same.

Each file waveform was also visually inspected for anomalies and, if detected, it was noted. Twenty-four (24) of the 136 file pairings either the CK file, the QP file, or both contained very one short “digital glitch”, four (4) files contained two glitches, and two (2) files contained three glitches. The glitches were high amplitude noise and were a fraction of a second in duration. They are the result of small digital errors introduced during a copying or transcoding procedure often caused by a minor fluctuation in electrical power. In each case phase cancellation occurred up to the point of the glitch, and cancellation resumed immediately thereafter.

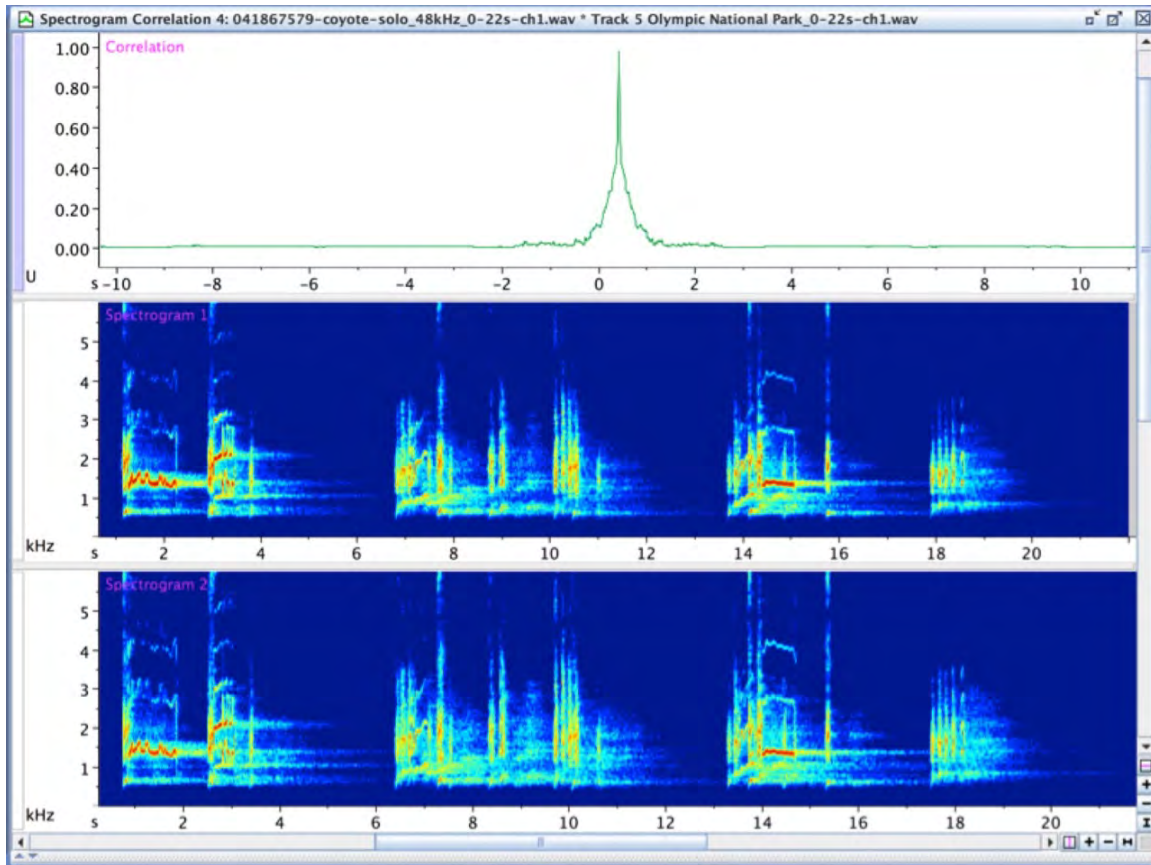
In three instances the ckennedy342 file was found to have a shorter total length than the Quiet Planet file, but in each case phase cancellation between the paired files occurred up to the point in time that the ckennedy342 file terminated.

Using the phase inversion technique to compare each pair of files, complete or near complete cancellation occurred upon summing the two files, evidence that the two files are indeed the same. There were files where cancellation was not complete, though nearly so. Where cancellation was not complete, the remaining audio was of extremely low volume demonstrating that the files are effectively the same. To hear the audio components left following summing, playback volume was increased by 30 dB over the standard monitoring level in order to make the components audible—a listening level that would be excessive when playing back either the ckennedy342 or Quiet Planet files prior to summing.

Analysis comparing the ckennedy342 files to Hempton’s source audio files (the works submitted to the copyright office and copyrighted) is possible. To do so will require a substantial amount of time to review the source recordings and identify sections within the body of long recordings, and I have just begun to undertake this review. Depending upon the methods used to derive the ckennedy342 and Quiet Planet audio, this analysis may include additional techniques such as spectrographic analysis. For example, a preliminary spectrographic comparison of 22 seconds of coyote vocalizations from both the ckennedy342 file 041867579 and the Hempton

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copyrighted file Track 5 Olympic National Park showed a 97 percent correlation (see image below). Without question these coyote vocalizations are the same audio. Post-production processing likely accounts for the slight different from 100% correlation.



Accordingly, after both listening to the files and subjecting the files to digital analysis, I was unable to find even one instance where the file suspected as being Gordon Hempton's was not, in fact, Mr. Hempton's. I am confident in this conclusion. I would note, however, that the methods undertaken are not exhaustive and my pursuit of these inquiries was limited by the time I had with the raw data and illness in my immediate family. In my opinion, however, additional tests would be redundant and add little additional value and would not increase my confidence. I would be happy to opine further on these tests and procedures and can do so at the direction of Mr. Hempton or the Court.

Appendix A

Audio File Pairings subjected to Phase Inversion Testing

ckennedy342 file

Hempton Quiet Planet file

1)	041894304-thunder-close	QP01 0007 Thunder close
2)	041894388-thunder-distant	QP01 0009 Thunder distant
3)	041869774-rain-soft	QP01 0011 Rain soft
4)	041869740-rain-moderate	QP01 0012 Rain moderate
5)	041869802-rain-strong	QP01 0013 Rain strong
6)	041869759-rain-downpour	QP01 0014 Rain downpour
7)	041869797-rain-storm-aftermath	QP01 0015 Rain storm aftermath
8)	041892622-stream-rolling-intricate	QP01 0019 Stream rolling intricate
9)	041869177-insect-cricket-isolated	QP01 0028 Insect crickets isolated
10)	041869286-jungle-wetland-insects	QP01 0034 Jungle wetland insects
11)	041895854-tropical-forest-morning-ambien	QP01 0036 Tropical forest morning ambience waterdrops
12)	041895927-tropical-forest-stream	QP01 0041 Tropical forest stream
13)	041895739-tropical-forest-night	QP01 0042 Tropical forest night
14)	041868496-deciduous-forest-morning-songb	QP01 0045 Deciduous forest morning songbirds
15)	041870040-deciduous-forest-country-morni	QP01 0046 Deciduous forest country morning
16)	041868114-deciduous-forest-morning-songb	QP01 0047 Deciduous forest morning songbirds sapsucker
17)	041868510-deciduous-forest-songbird-solo	QP01 0056 Deciduous forest songbird solo
18)	041867441-coniferous-forest-morning-vari	QP01 0062 Coniferous forest morning varied thrush
19)	041867242-coniferous-forest-bird-song-fl	QP01 0068 Coniferous forest bird song flutter away
20)	041869656-prairie-night-wind-coyote	QP01 0086 Prairie night wind coyote
21)	041869527-prairie-meadowlark-song-elemen	QP01 0088 Prairie meadowlark song element
22)	041869526-prairie-meadowlark-song-elemen	QP01 0089 Prairie meadowlark song element
23)	041869533-prairie-meadowlark-song-elemen	QP01 0090 Prairie meadowlark song element
24)	041869531-prairie-meadowlark-song-elemen	QP01 0091 Prairie meadowlark song element
25)	041896301-wetland-lake-birds-trout	QP01 0099 Wetland lake birds trout
26)	041896324-wetland-pac-chorus-frog-isolat	QP01 0107 Wetland pac chorus frog isolated
27)	041896437-wetland-pac-chorus-frog-chorus	QP01 0108 Wetland pac chorus frog chorus
28)	041896759-wetland-spadefoot-toad-chorus	QP01 0112 Wetland spadefoot toad chorus
29)	041869971-riparian-zone-songbirds-1	QP01 0116 Riparian Zone songbirds
30)	041869976-riparian-zone-songbirds-2	QP01 0117 Riparian Zone songbirds
31)	041870011-riparian-zone-thrush	QP01 0118 Riparian Zone thrush
32)	041867579-coyote-solo	QP01 0138 Coyote solo
33)	041691578-wind-plants-light-variable	QP02 0156 Wind plants light variable
34)	041692039-wind-plants-wispy-breeze	QP02 0159 Wind plants wispy breeze
35)	041691777-wind-plants-soft-gusty	QP02 0160 Wind plants soft gusty
36)	041736427-wind-grass-wispy-breeze	QP02 0200 Wind grass wispy breeze
37)	041736615-wind-grass-wispy-barren-hf-ins	QP02 0206 Wind grass wispy barren hf insect
38)	041736664-wind-grass-wispy-hf-insect-mos	QP02 0207 Wind grass wispy hf insect mostly absent
39)	041690504-wind-coniferous-variable-stron	QP02 0228 Wind coniferous variable strong

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40)	041689673-wind-coniferous-clicky-jack-pi	QP02 0231 Wind coniferous clicky jack pine
41)	041689580-wind-coniferous-brisk-variable	QP02 0233 Wind coniferous brisk variable twig clicks
42)	041690355-wind-coniferous-strong-various	QP02 0235 Wind coniferous strong various gusts
43)	041615549-thunder-close	QP03 0270 Thunder close
44)	041616037-thunder-moderately-close	QP03 0272 Thunder moderately close
45)	041616027-thunder-long-peel	QP03 0274 Thunder long peel
46)	041615937-thunder-echo	QP03 0276 Thunder echo
47)	041616044-thunder-moderately-distant-1	QP03 0279 Thunder moderately distant
48)	041615709-thunder-distant-short	QP03 0285 Thunder distant short
49)	041616111-thunder-very-distant-booming-2	QP03 0288 Thunder very distant booming
50)	041616089-thunder-very-distant-booming-1	QP03 0289 Thunder very distant booming
51)	041613733-rain-builds-subsides-drippy	QP03 0305 Rain builds subsides drippy
52)	041614788-rain-mod-light-drippy-aftermat	QP03 0308 Rain mod light drippy aftermath
53)	041614484-rain-light-drippy-aftermath	QP03 0309 Rain light drippy aftermath
54)	041614861-rain-puddle-light	QP03 0316 Rain on puddle light
55)	041616789-thunderstorm-dry-extended	QP03 0327 Thunderstorm dry extended
56)	041617588-thunderstorm-very-light-rain	QP03 0328 Thunderstorm very light rain
57)	041617129-thunderstorm-light-rain-1	QP03 0329 Thunderstorm light rain
58)	041617673-thunderstorm-mod-light-rain	QP03 0330 Thunderstorm mod light rain
59)	041617458-thunderstorm-light-rain-3	QP03 0331 Thunderstorm light rain
60)	041649303-snow-melting	QP04 0337 Snow melting
61)	041650417-trickle-rapid	QP04 0340 Trickle rapid
62)	041650250-streamlet-dribbling	QP04 0342 Streamlet dribbling
63)	041650029-stream-small-sparkling	QP04 0349 Stream small sparkling
64)	041649588-stream-details-gurgling	QP04 0353 Stream details gurgling
65)	041649723-stream-gurgling	QP04 0354 Stream gurgling
66)	041649371-stream-bright-sparkling-2	QP04 0360 Stream bright sparkling
67)	041648671-river-small-details	QP04 0375 River small details
68)	041648665-river-small-gurgling	QP04 0376 River small gurgling
69)	041648702-river-small-rolling	QP04 0377 River small rolling
70)	041648732-river-small-splashy	QP04 0378 River small splashy
71)	041647873-river-humming	QP04 0384 River humming
72)	041647076-river-churning	QP04 0386 River churning
73)	041648370-river-rapids-stronger	QP04 0388 River rapids stronger
74)	041648257-river-raging	QP04 0389 River raging
75)	041653111-waterfall-splashy	QP04 0393 Waterfall splashy
76)	041653067-waterfall-spashier	QP04 0394 Waterfall spashier
77)	041650534-waterfall-classic	QP04 0395 Waterfall classic
78)	041650475-trickles-splashy-rocks	QP04 0398 Trickles splashy in rocks
79)	041649691-stream-gurgling-rocks	QP04 0399 Stream gurgling in rocks
80)	041649612-stream-drumming-rocks	QP04 0400 Stream drumming in rocks
81)	041649878-stream-rolling-rocks	QP04 0401 Stream rolling in rocks
82)	041648687-river-small-rocks-2	QP04 0402 River small in rocks
83)	041647541-river-gurgling-rocks-2	QP04 0404 River gurgling in rocks
84)	041647404-river-gurgling-babbling-rocks	QP04 0406 River gurgling babbling in rocks
85)	041648619-river-rumbling-rocks-waterfall	QP04 0407 River rumbling in rocks waterfall

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86)	041647142-river-drumming-rocks-waterfall	QP04 0408 River drumming in rocks waterfall
87)	041648784-river-soft-gurgling-rocks-wate	QP04 0409 River soft gurgling in rocks waterfall
88)	041650062-stream-sparkling-distant	QP04 0414 Stream sparkling distant
89)	041648518-river-rolling-moderately-dista	QP04 0417 River rolling moderately distant
90)	041650775-waterfall-rapids-moderately-di	QP04 0426 Waterfall rapids moderately distant
91)	041650573-waterfall-narrow-tall-moderate	QP04 0430 Waterfall narrow tall moderately distant
92)	041652754-waterfall-rapids-moderately-di	QP04 0431 Waterfall rapids moderately distant
93)	041650627-waterfall-rapids-distant-1	QP04 0437 Waterfall rapids distant
94)	041650592-waterfall-rapids-babbling-dist	QP04 0438 Waterfall rapids babbling distant
95)	041648607-river-profile	QP04 0446 River profile
96)	048610515-surf-boulders-slow-distant-res	QP05 0492 Surf boulders slow distant resonant
97)	048613483-surf-pebbles-bright	QP05 0503 Surf pebbles bright
98)	048619360-surf-pebbles-splashy	QP05 0504 Surf pebbles splashy
99)	048616535-surf-pebbles-pounding	QP05 0505 Surf pebbles pounding
100)	048620580-surf-pebbles-big-bright	QP05 0512 Surf pebbles big bright
101)	048620381-surf-pebbles-big-bubble-detail	QP05 0514 Surf pebbles big bubble detail
102)	048623015-surf-pebbles-mod-distant	QP05 0517 Surf pebbles mod distant
103)	048622503-surf-pebbles-distant	QP05 0519 Surf pebbles distant
104)	048624622-surf-sand-mod-confused	QP05 0532 Surf sand mod confused
105)	048625504-surf-sand	QP05 0535 Surf sand
106)	048669320-surf-sand-big-rolling	QP05 0538 Surf sand big rolling
107)	048666506-surf-driftwood	QP05 0544 Surf driftwood
108)	044265596-prairie-wind-soft	QP06 0586 Prairie wind soft
109)	044265526-prairie-wind-soft-gusting-bird	QP06 0587 Prairie wind soft gusting birds faint
110)	044442906-prairie-cricket-wind-sweeping	QP06 0619 Prairie crickets wind sweeping evening
111)	044442749-prairie-cricket-busy-wind-swe	QP06 0620 Prairie crickets busy wind sweeping night
112)	044442581-prairie-cricket-busy-wind-swe	QP06 0621 Prairie crickets busy wind sweeping night
113)	044445540-prairie-wind-light-sweeping-bi	QP06 0622 Prairie wind light sweeping birds crickets
114)	044445243-prairie-western-meadowlark-bri	QP06 0627 Prairie western meadowlark bright
115)	044444990-prairie-western-meadowlark-cho	QP06 0628 Prairie western meadowlark chortle
116)	044445216-prairie-western-meadowlark-son	QP06 0629 Prairie western meadowlark song element
117)	044444985-prairie-western-meadowlark-cal	QP06 0630 Prairie western meadowlark call
118)	044444986-prairie-western-meadowlark-cal	QP06 0631 Prairie western meadowlark call
119)	044444989-prairie-western-meadowlark-cal	QP06 0632 Prairie western meadowlark call
120)	044443801-prairie-lek-sage-grouse-1	QP06 0648 Prairie lek sage grouse
121)	044443793-prairie-lek-lesser-prairie-chi	QP06 0651 Prairie lek lesser prairie-chicken
122)	044442010-prairie-cricket-close	QP06 0666 Prairie cricket close
123)	044442034-prairie-cricket-expressive	QP06 0667 Prairie cricket expressive
124)	044442221-prairie-cricket-thunder-rollin	QP06 0668 Prairie cricket thunder rolling
125)	041652885-waterfall-rock-ledges-1	QP04 0397 Waterfall rock ledges V2
126)	041648683-river-small-rocks-1	QP04 0403 River small in rocks v2
127)	041647518-river-gurgling-rocks-1	QP04 0405 River gurgling in rocks v2
128)	041648780-river-soft-gurgling-rocks-wate	QP04 0410 River soft gurgling in rocks waterfall v2
129)	041650811-waterfall-rapids-moderately-di	QP04 0427 Waterfall rapids moderately distant V2
130)	041652761-waterfall-rapids-moderately-di	QP04 0428 Waterfall rapids moderately distant V3
131)	041650761-waterfall-rapids-moderately-di	QP04 0429 Waterfall rapids moderately distant V4

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132)	048581028-surf-rock-jetty-splashy-2	QP05 0474 Surf rock jetty splashy v2
133)	048622537-surf-pebbles-mod-distant-2	QP05 0518 Surf pebbles mod distant v2
134)	048668705-surf-driftwood-5	QP05 0548 Surf driftwood v5
135)	048668994-surf-driftwood-9	QP05 0552 Surf driftwood v9
136)	044442299-prairie-cricket-thunder-rollin	QP06 0669 Prairie cricket thunder rolling v2

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APPENDIX B

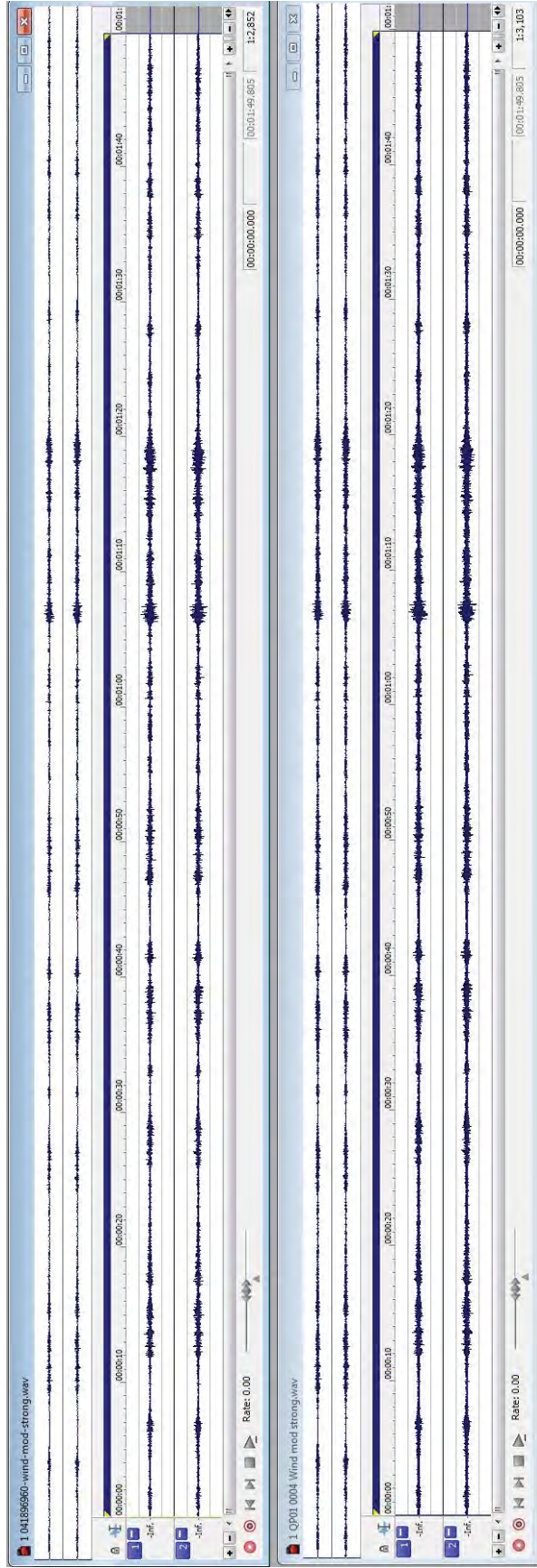
Hempton Wave Form Display Comparisons

Wave Form Display Comparisons

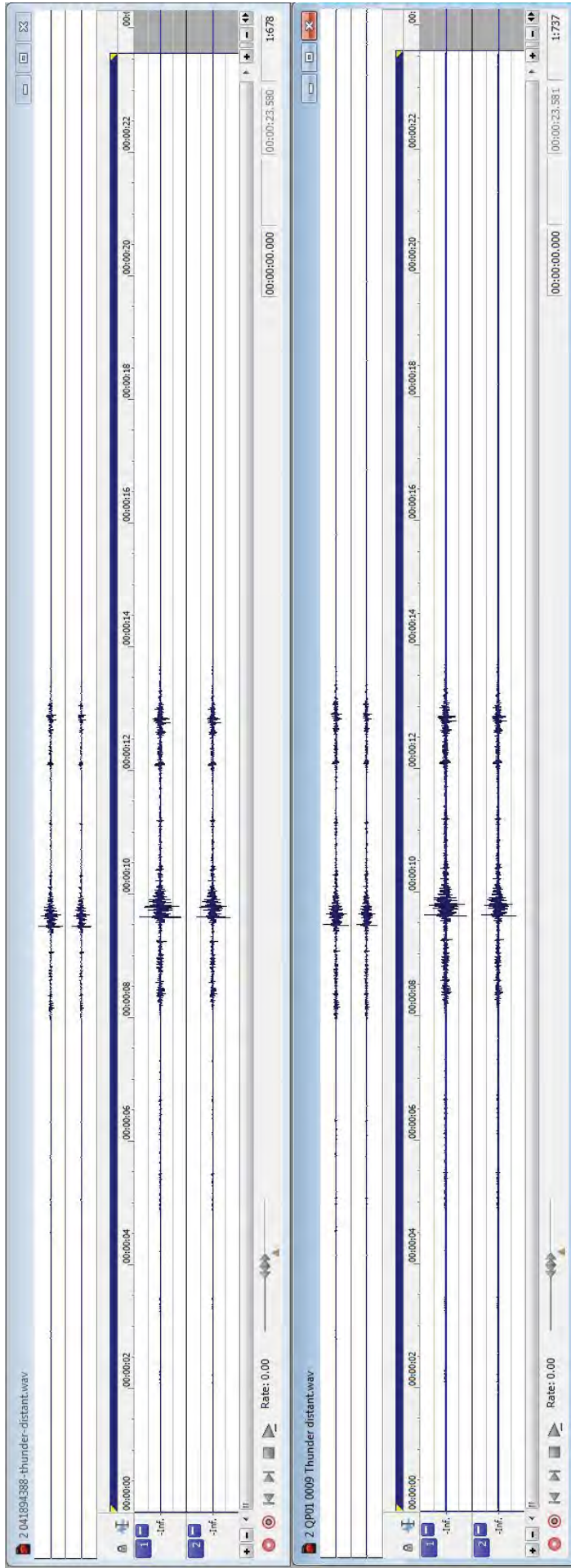
Showing exact matches in wave form and length (to one one thousandths of a second) between Hempton copyrighted files and Pond5 sold files

Gordon Hempton
9/1/2016

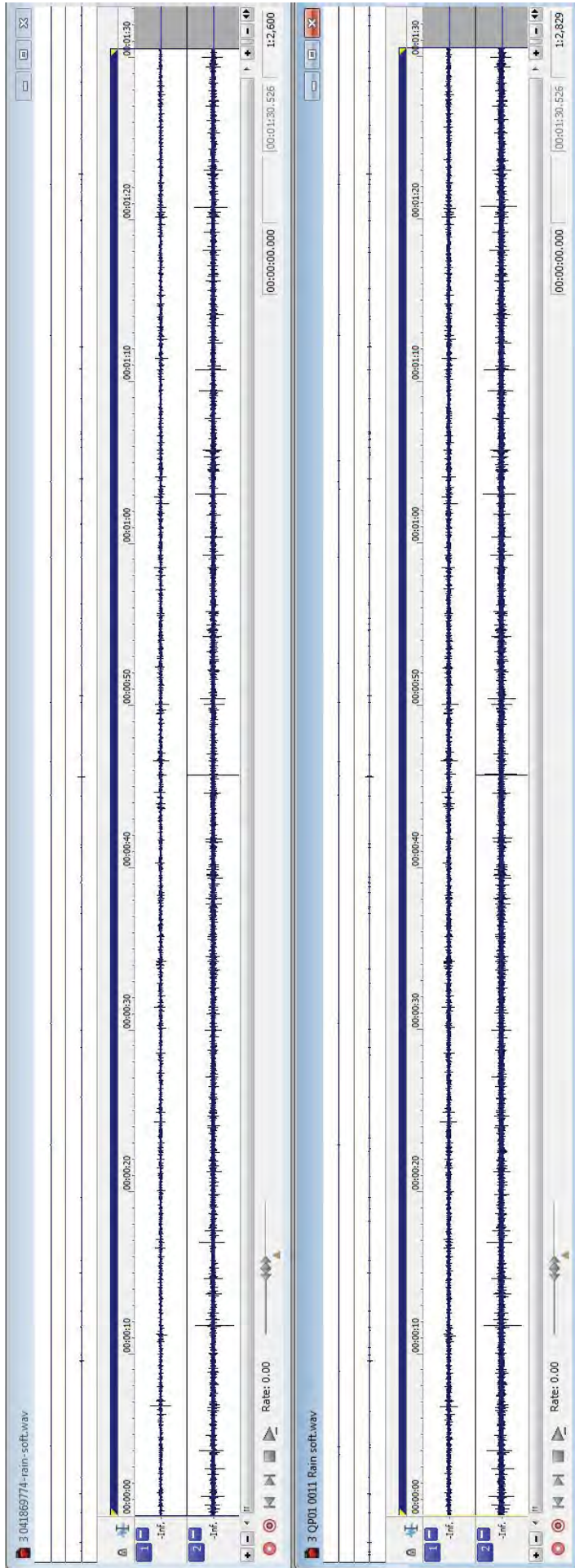
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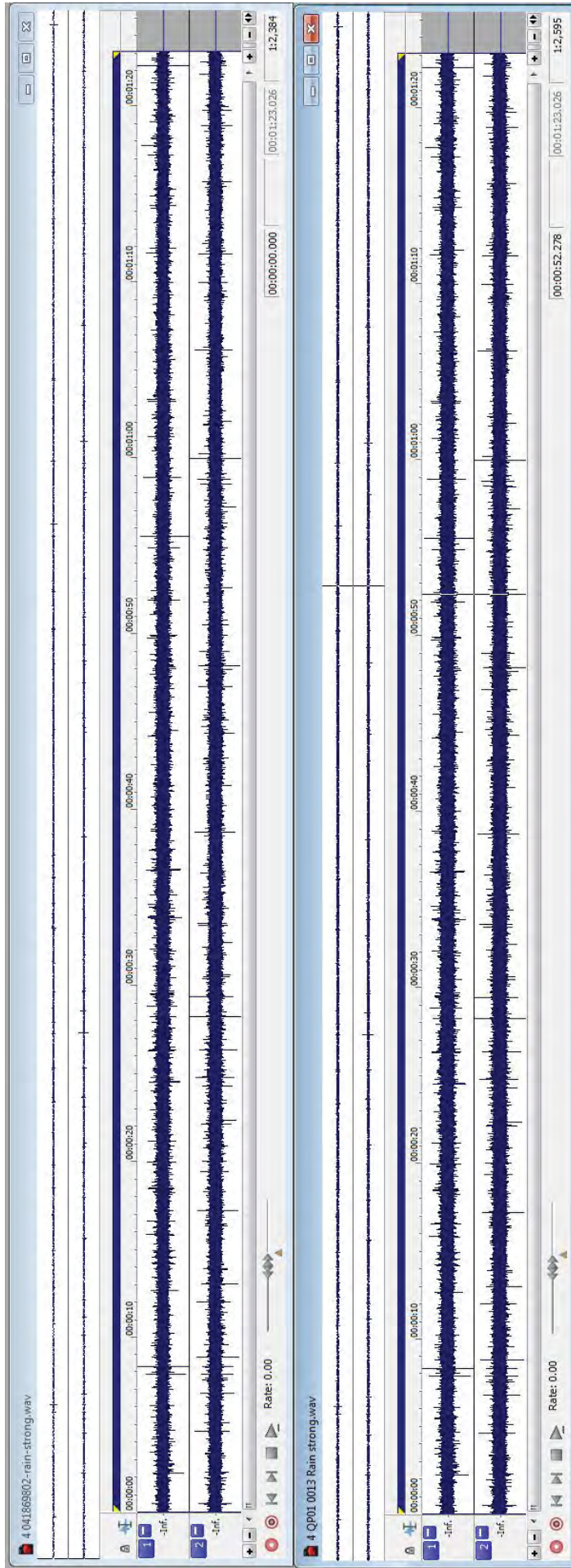
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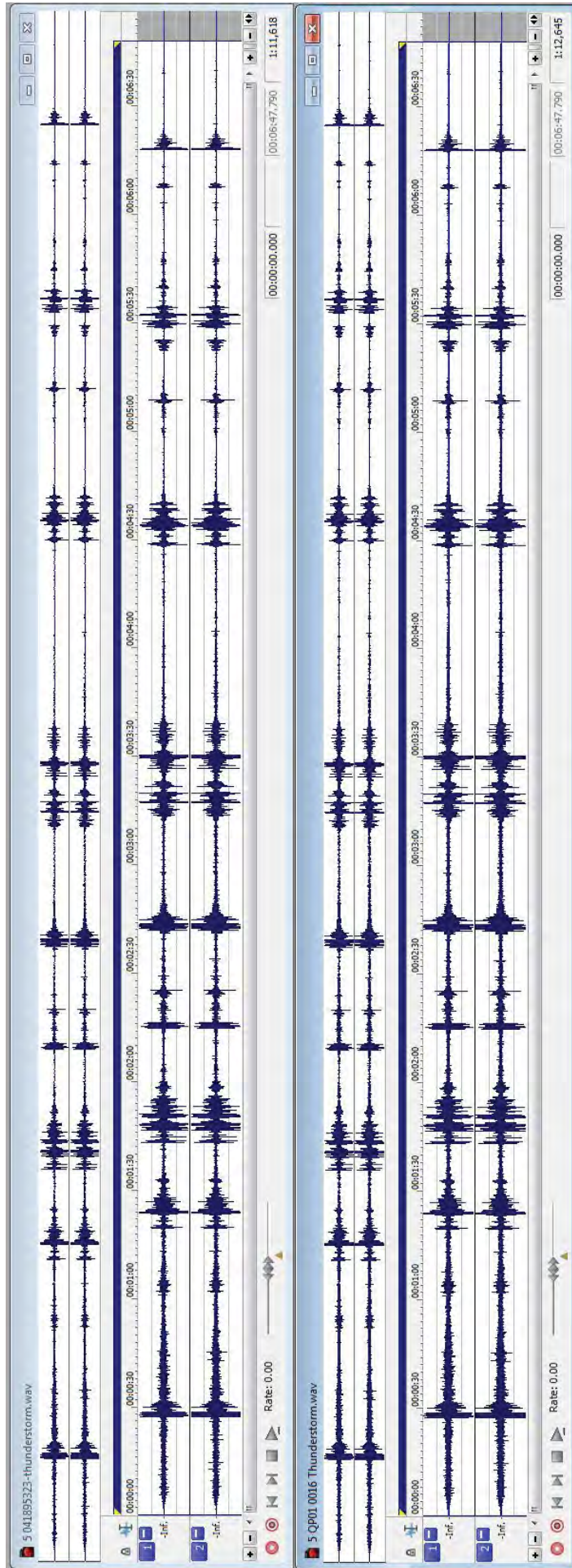
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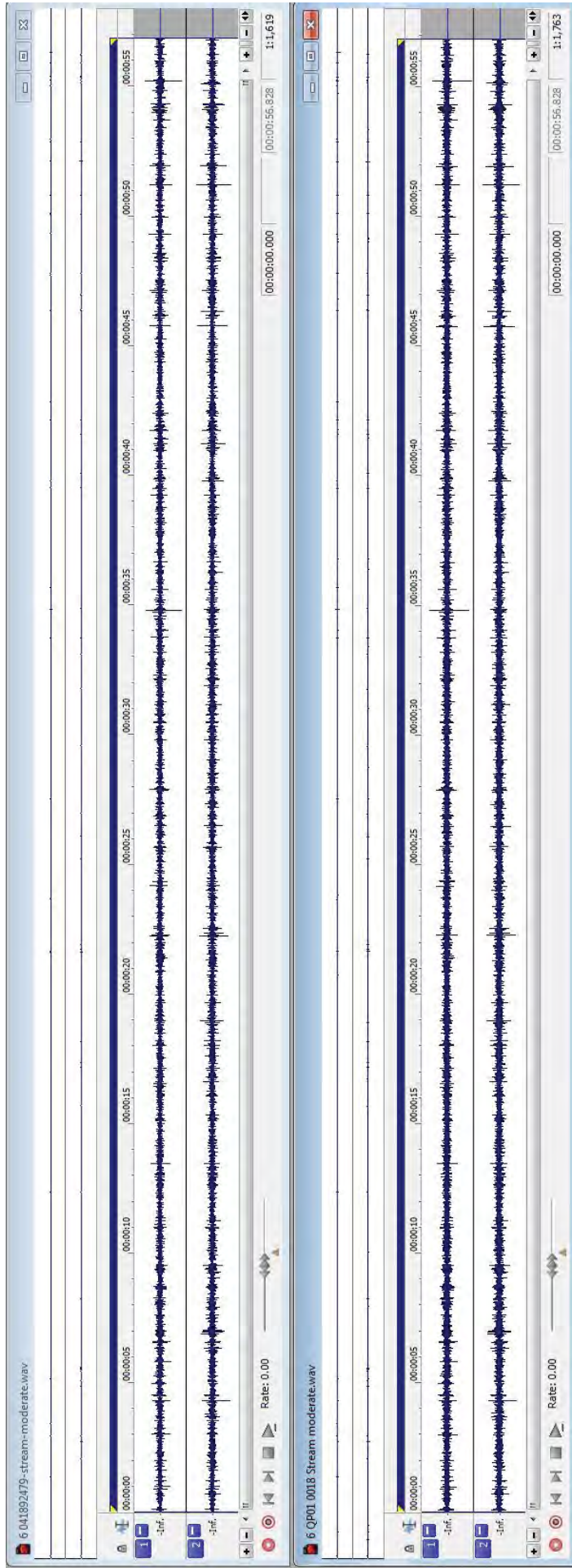
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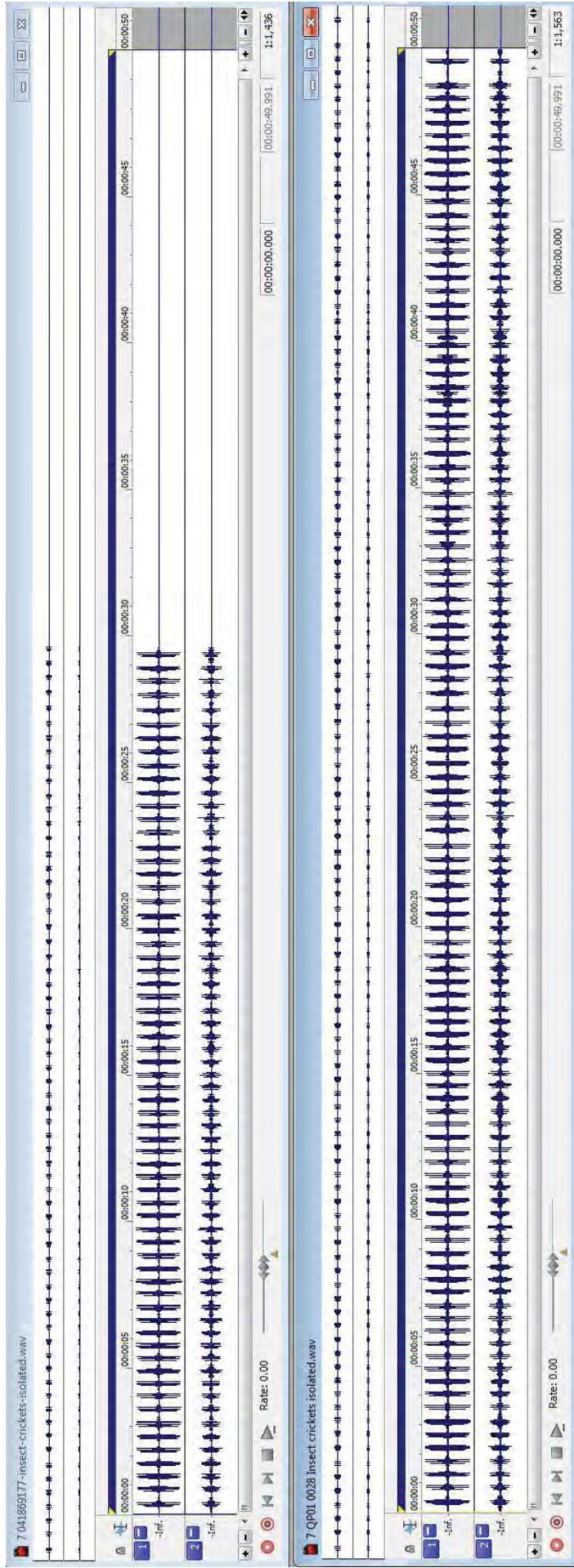


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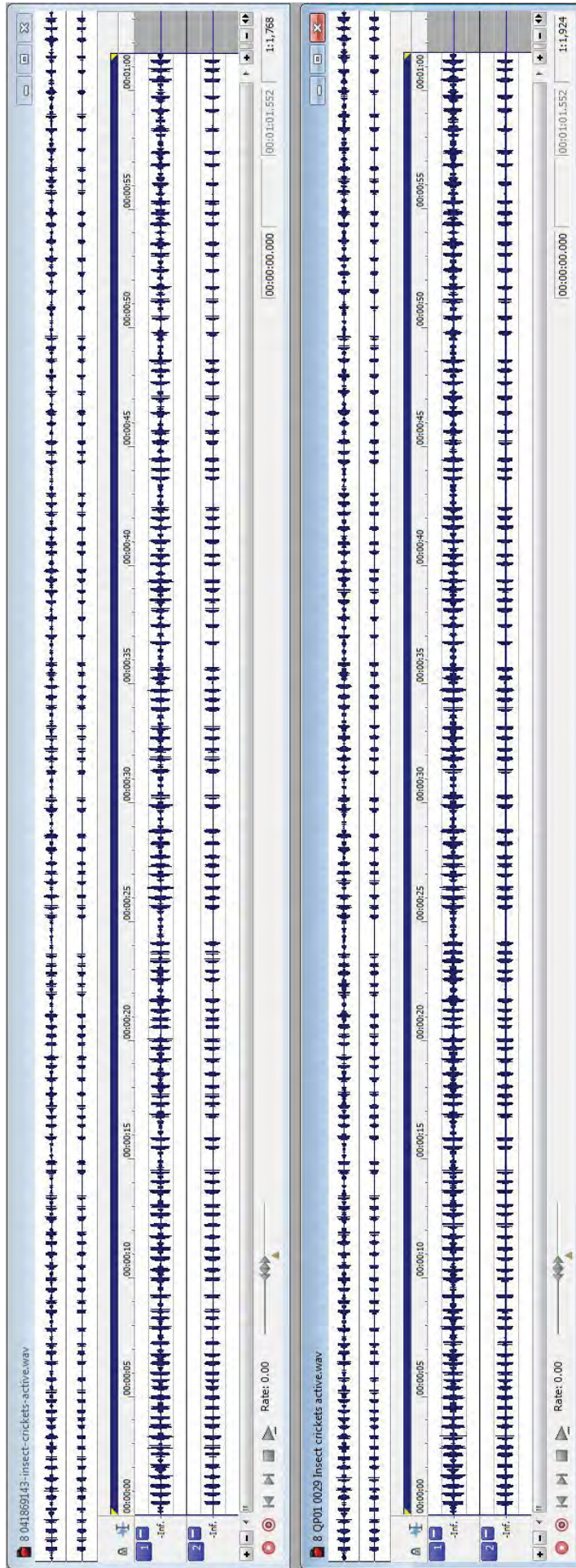
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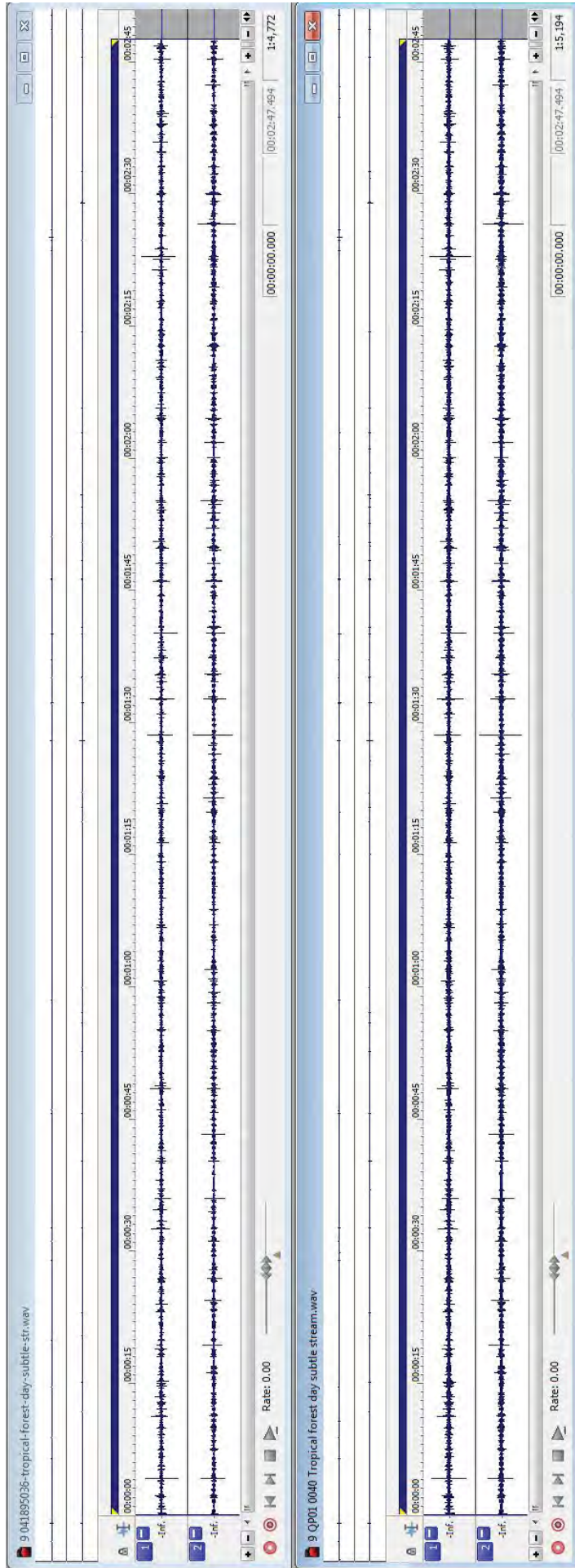


Top file is flawed Pond5 file with last 20 seconds muted.

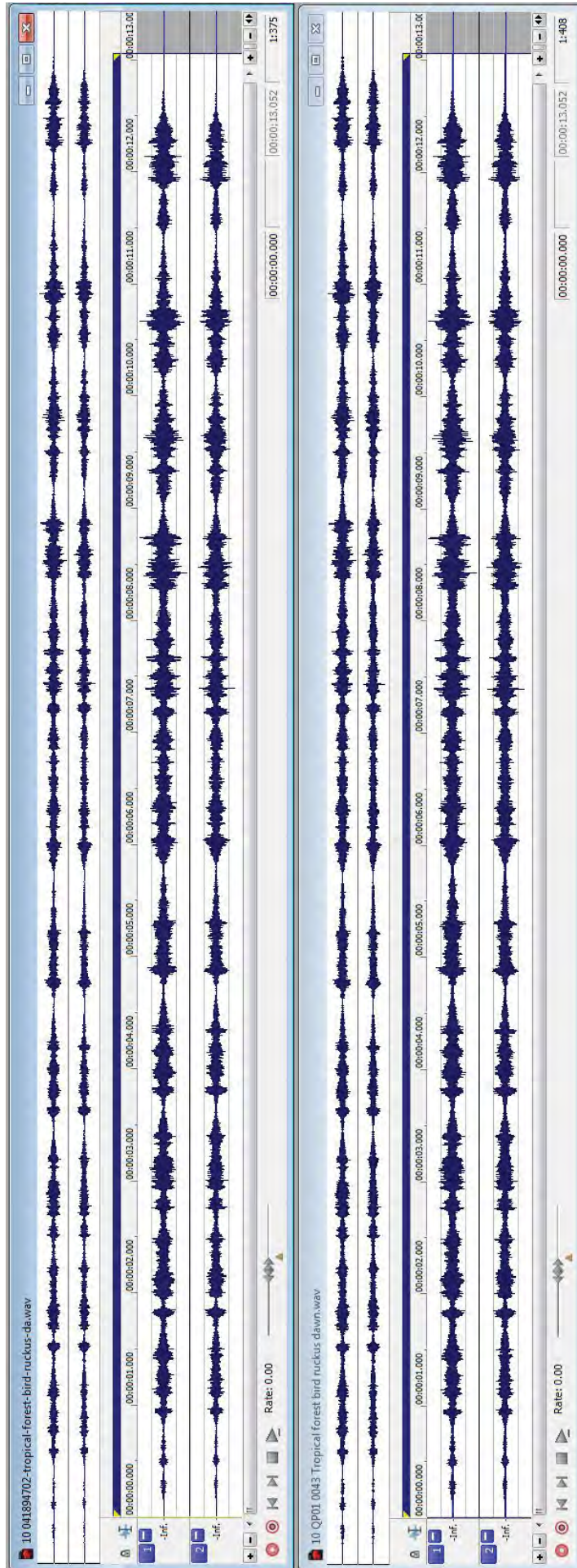
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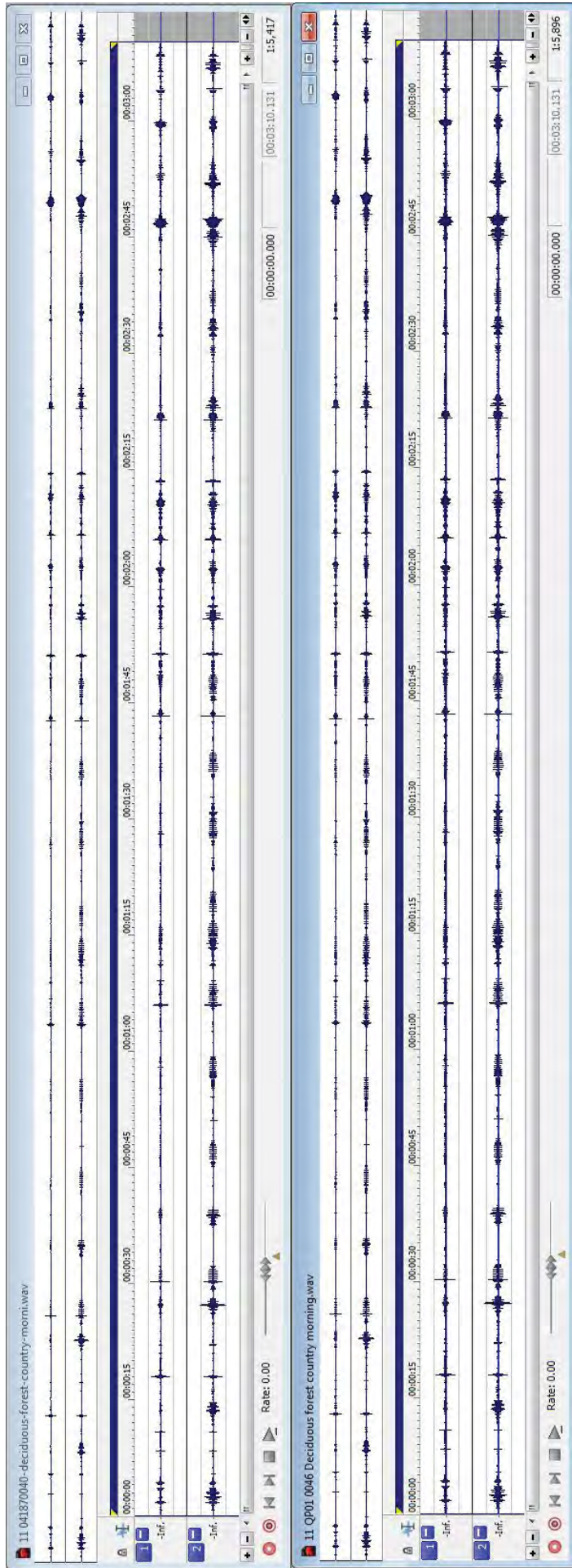
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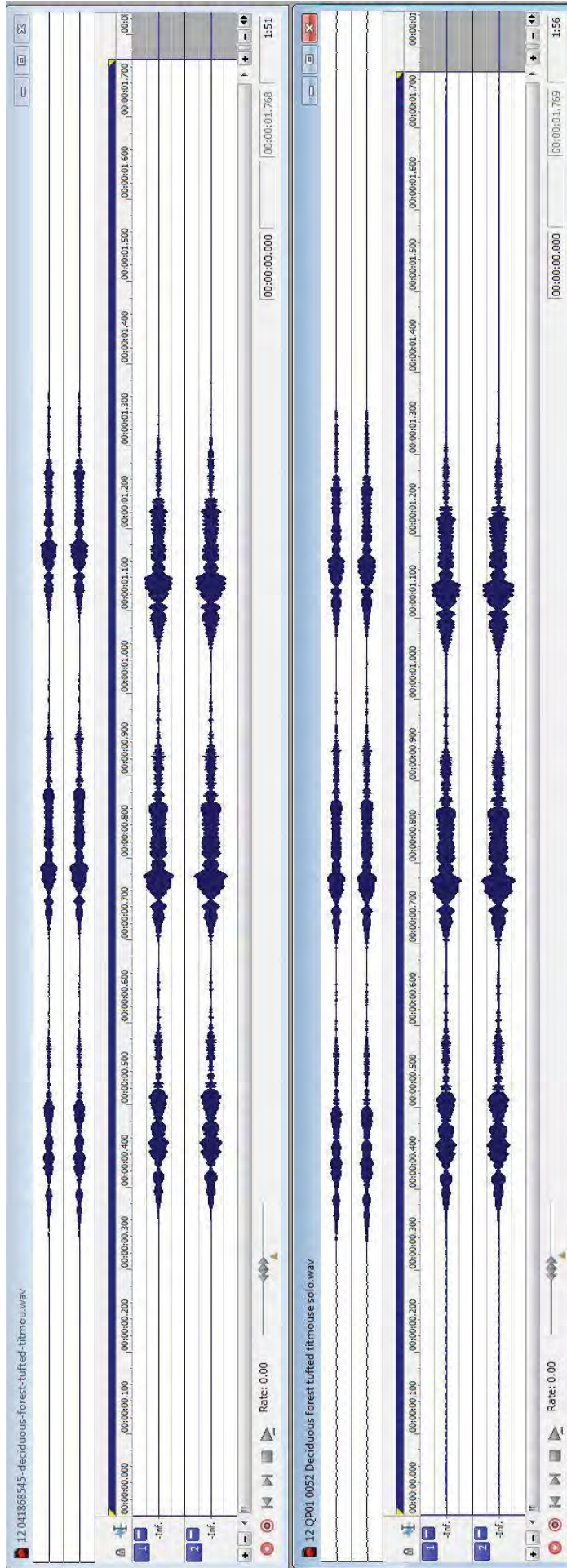
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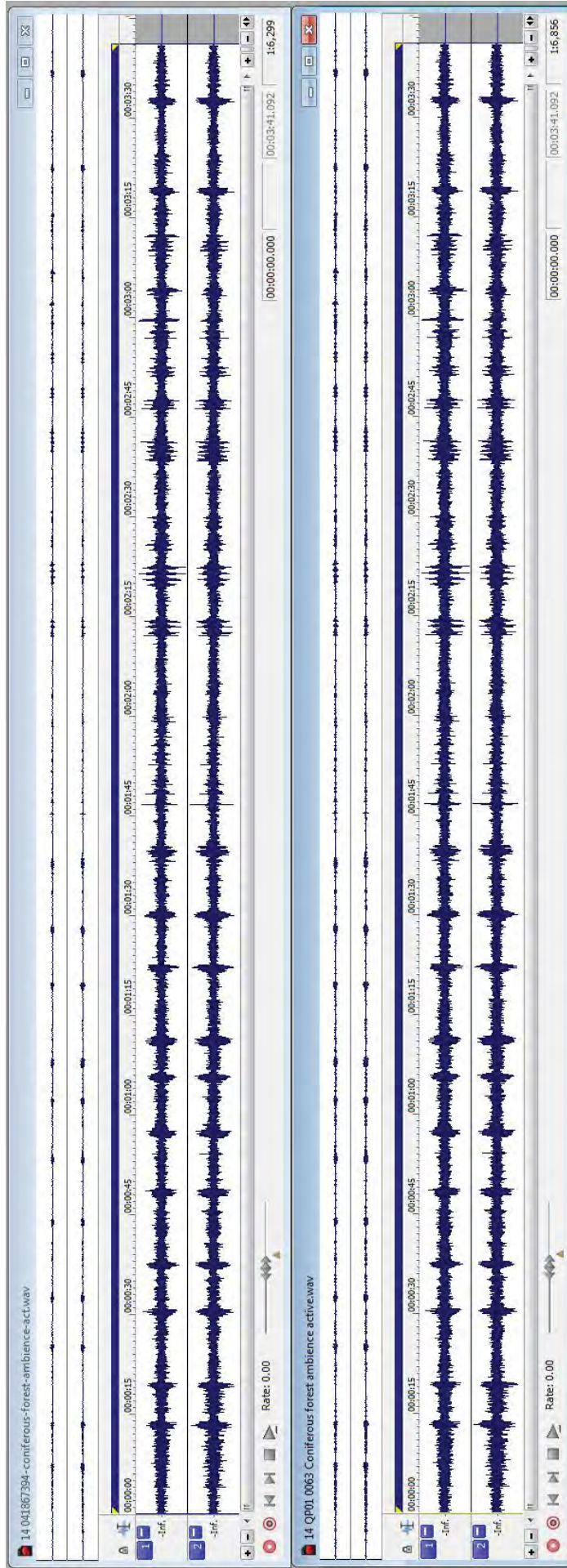
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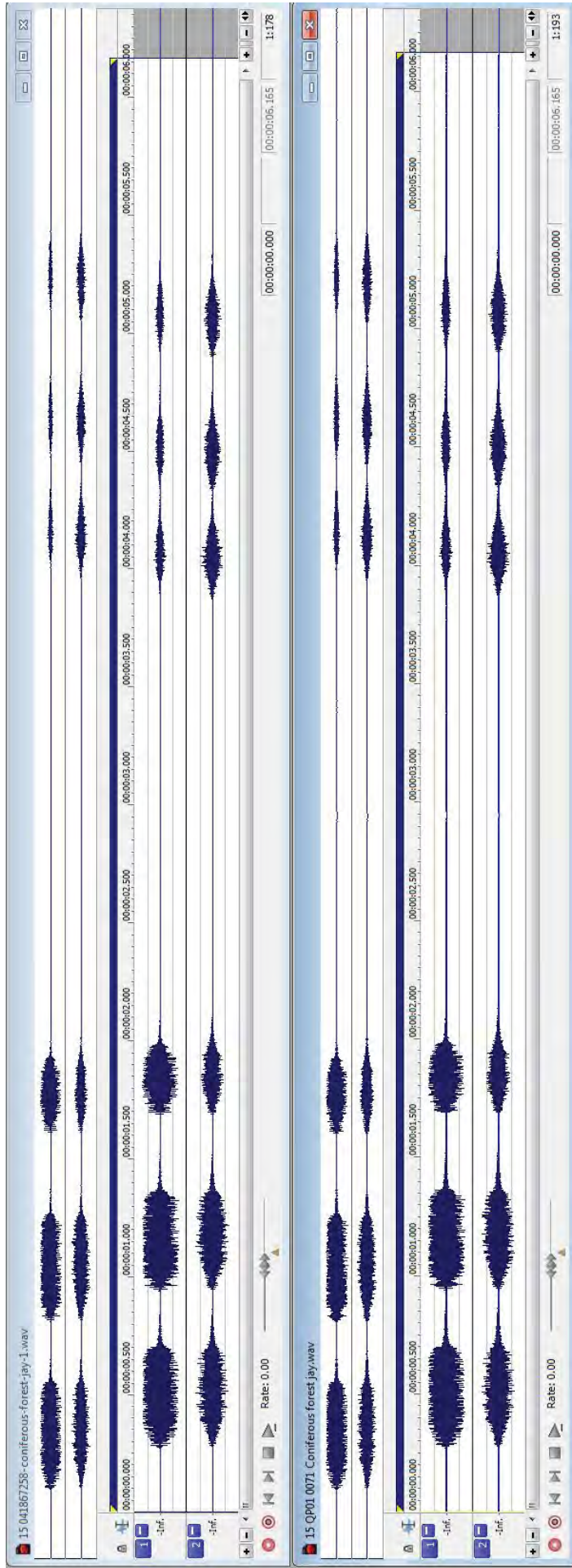


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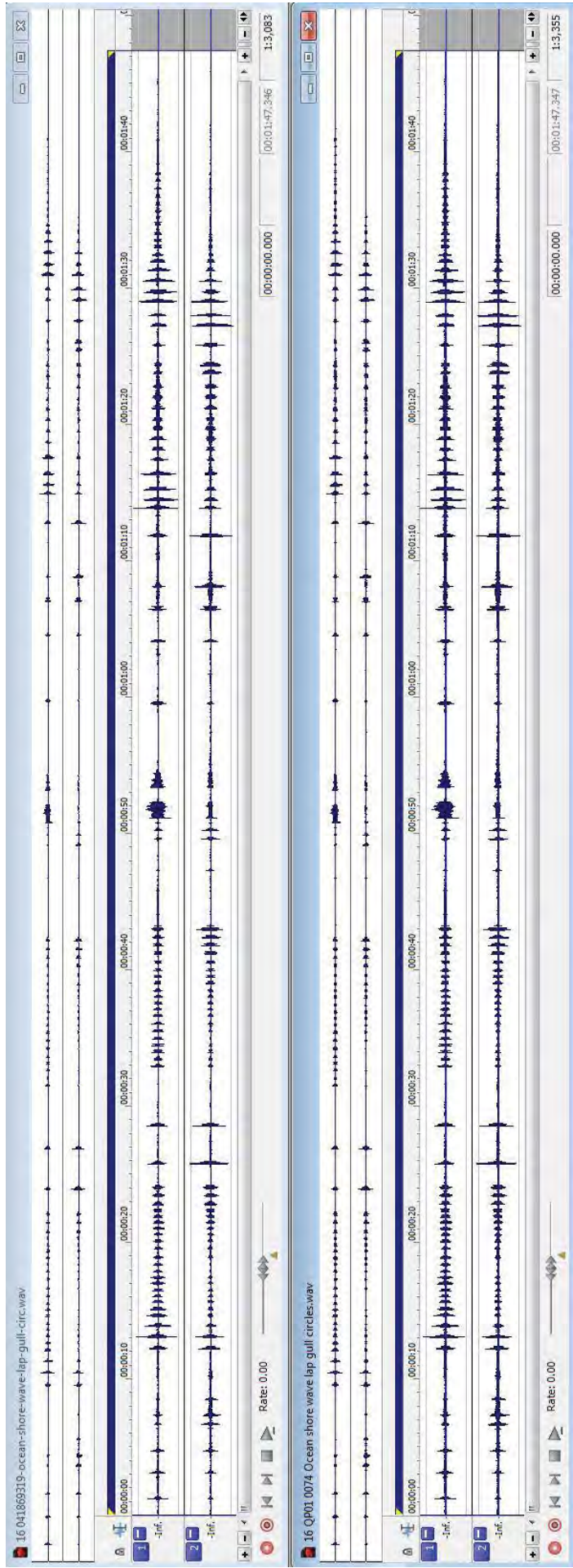


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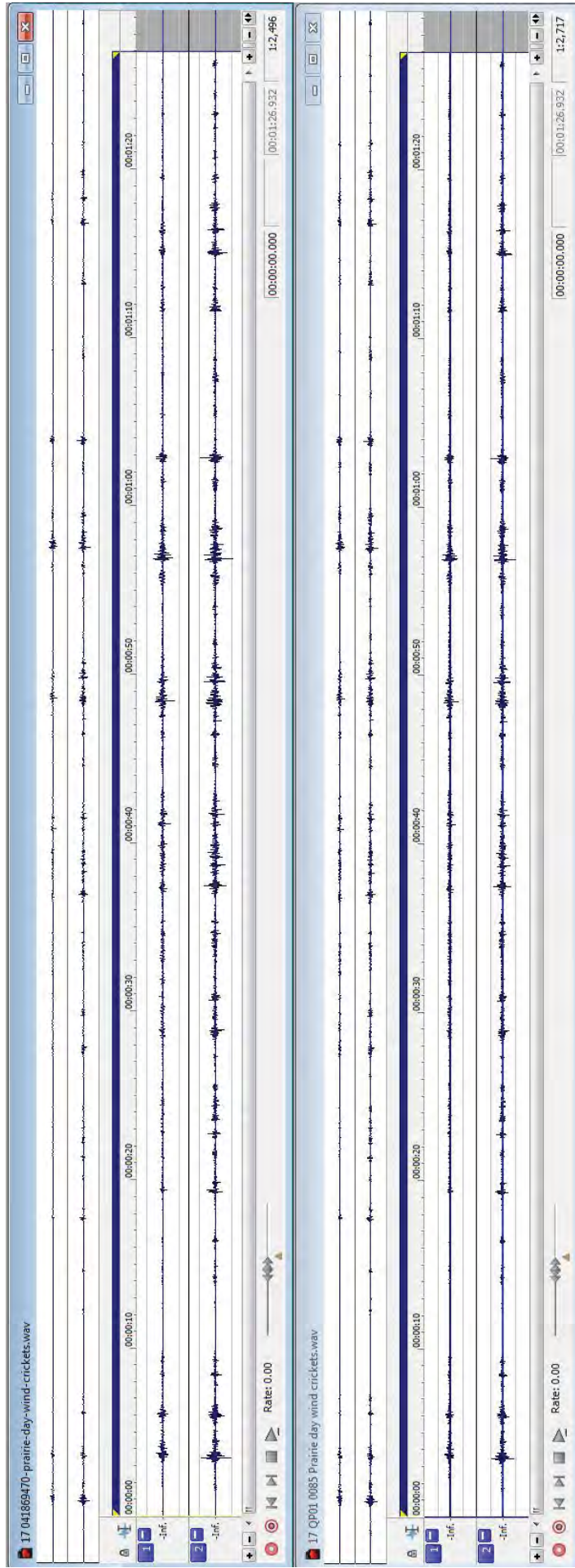
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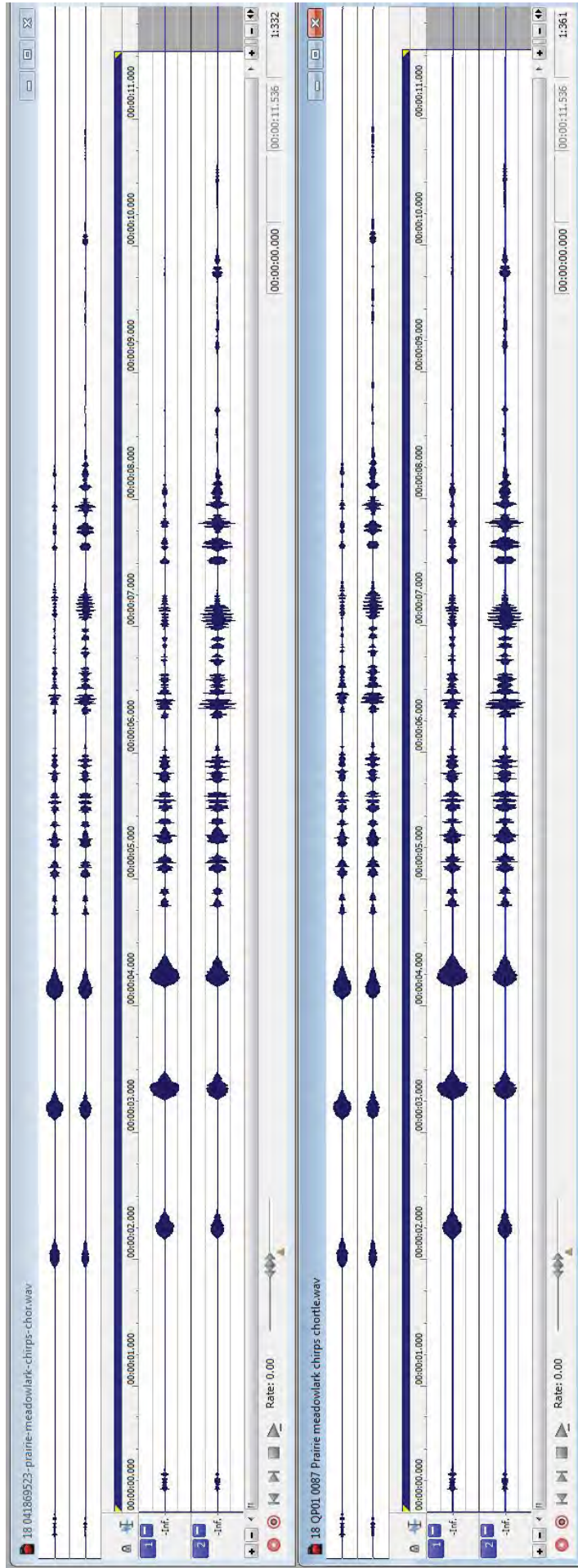
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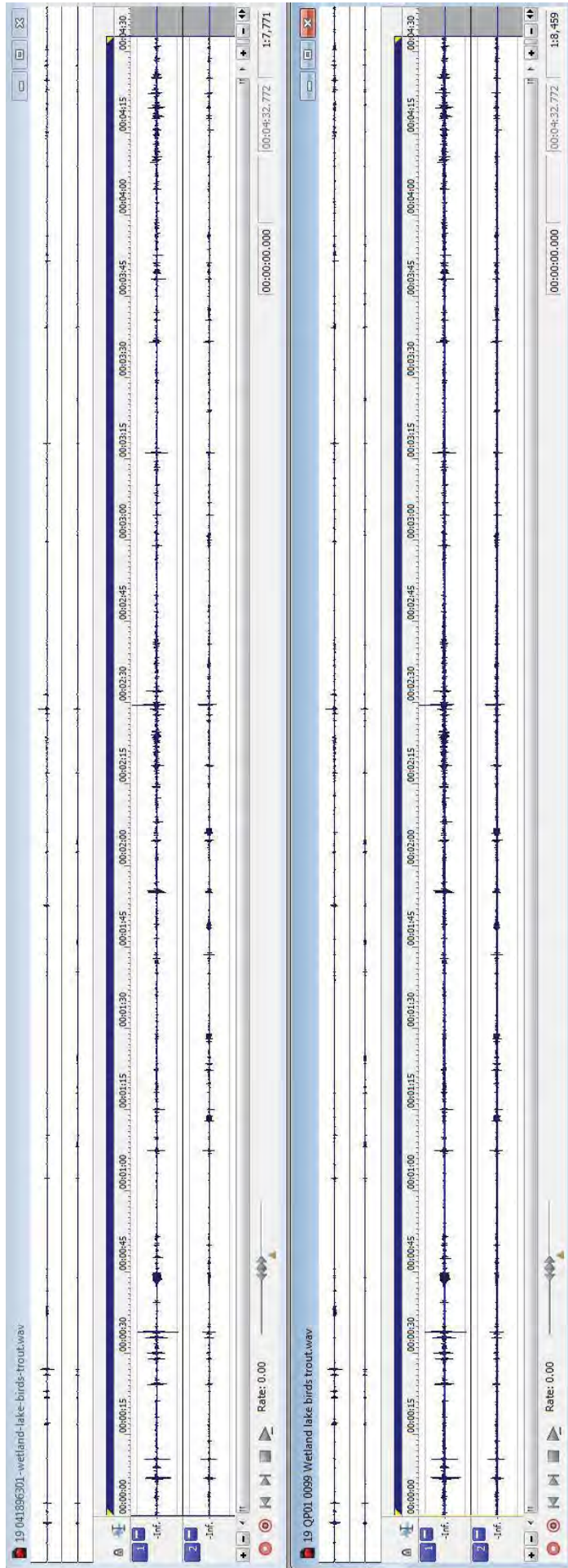
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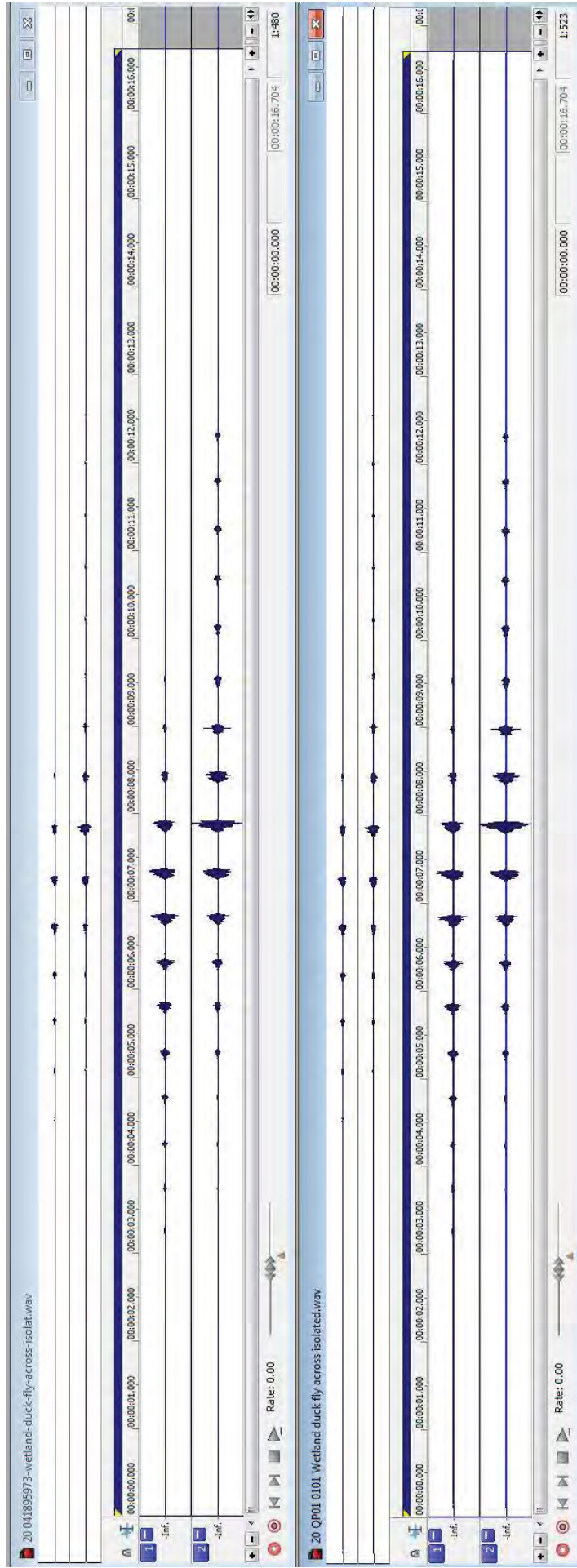
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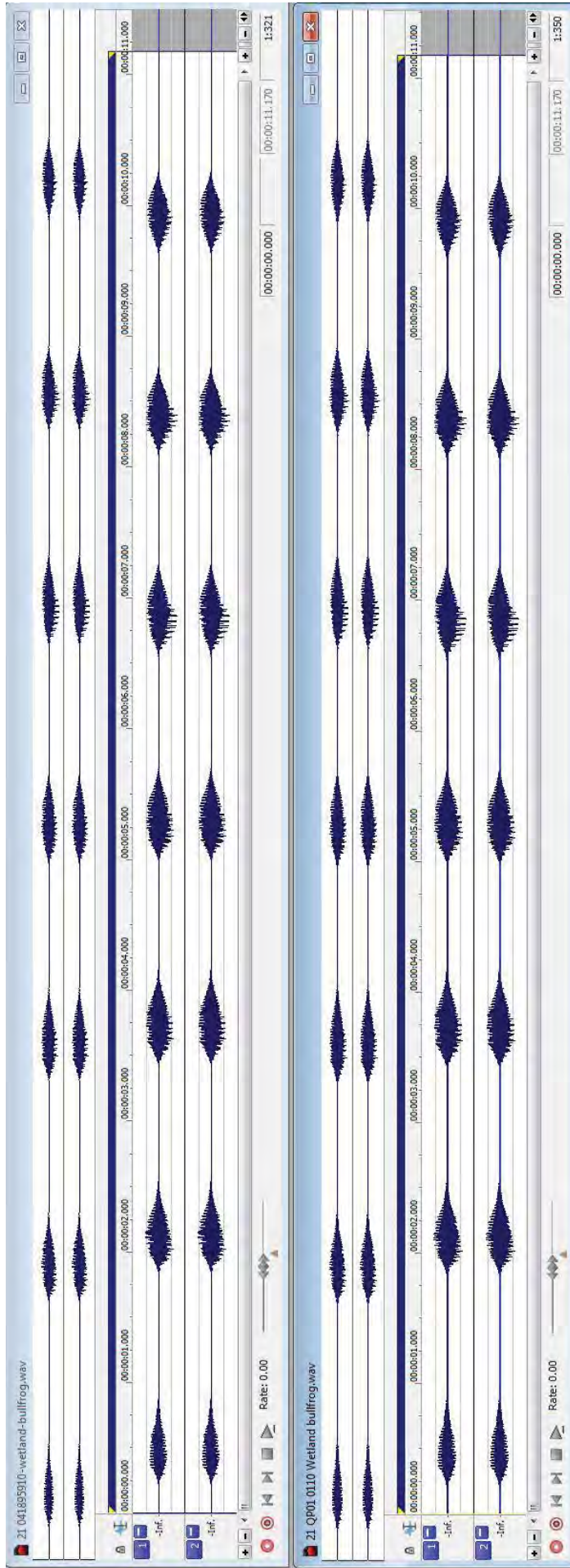
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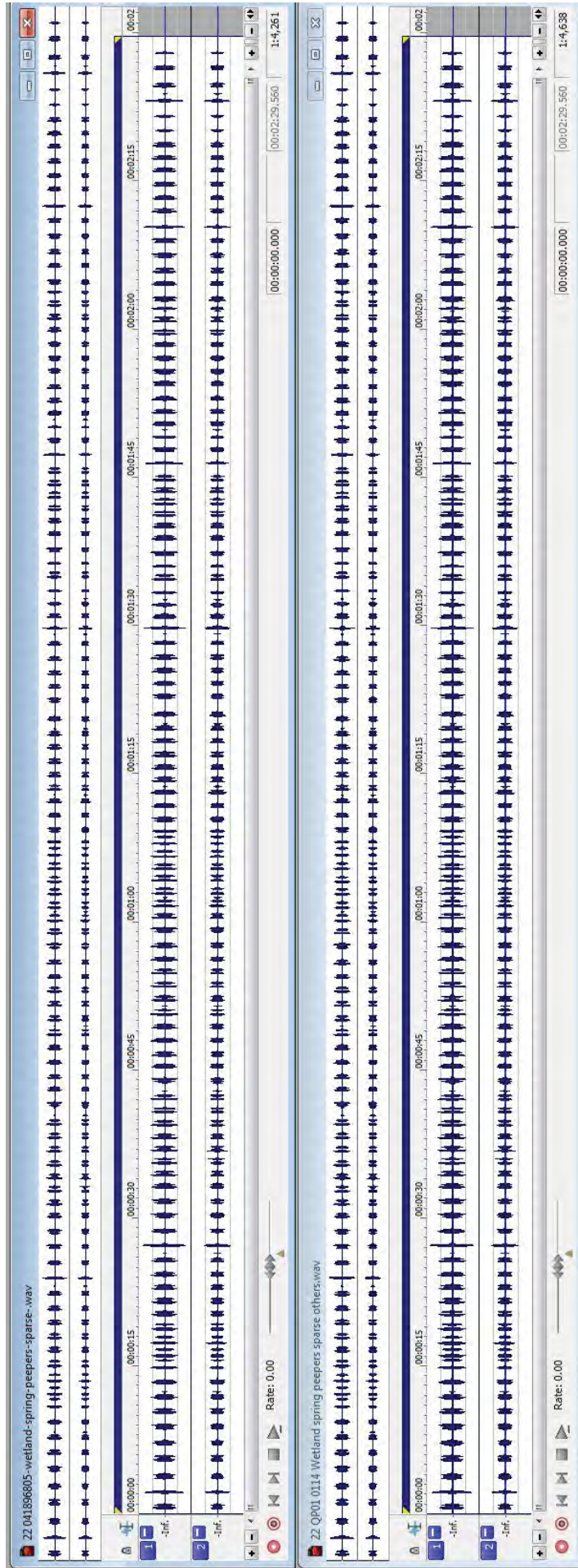


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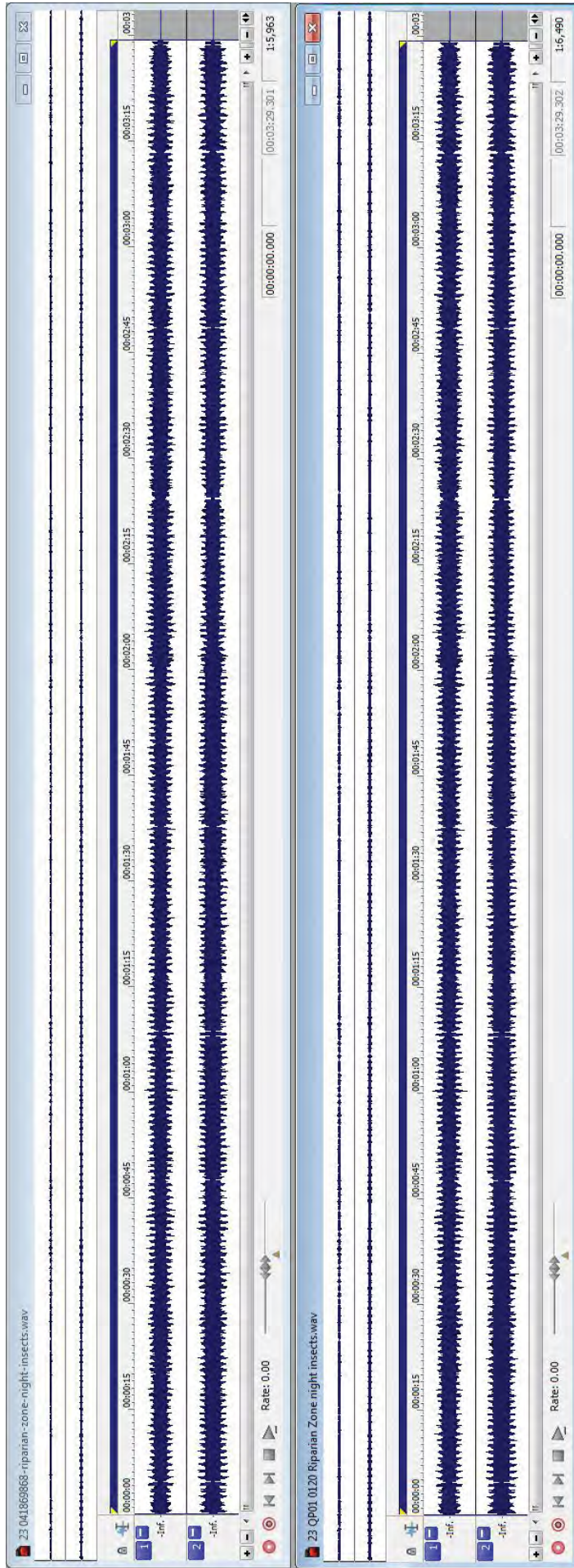


HEMP000603

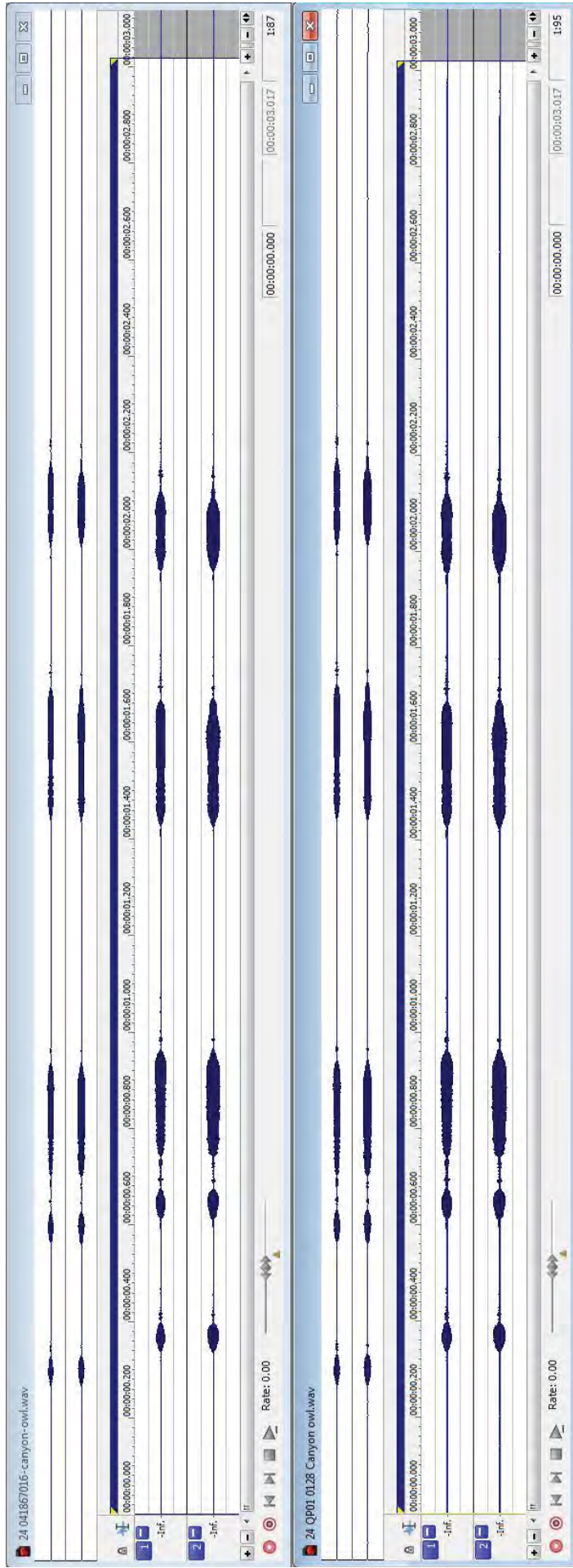
#22



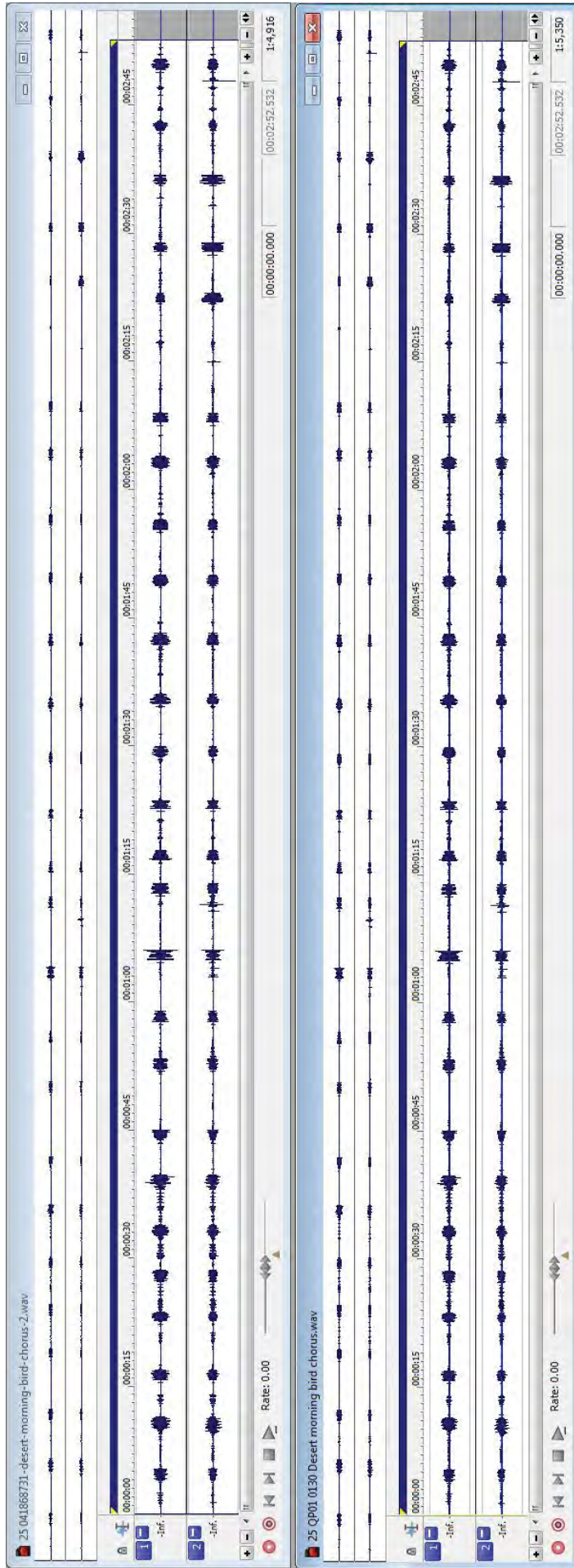
#23



#24

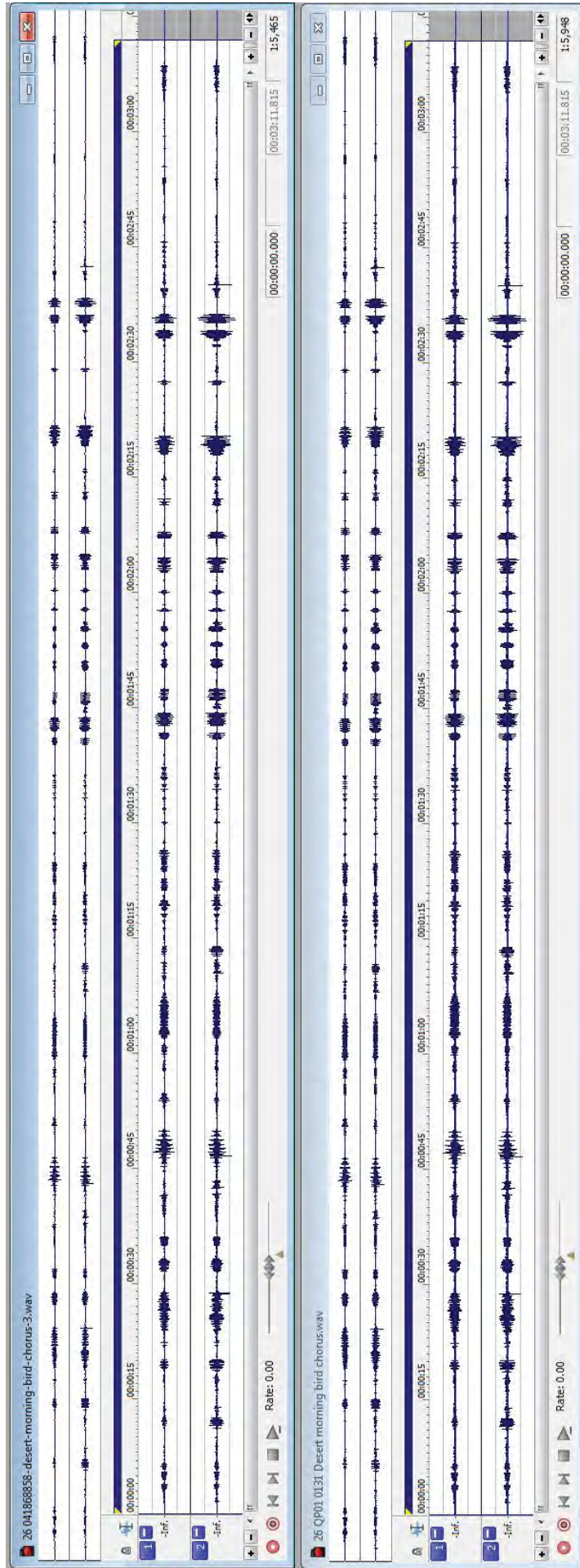


#25



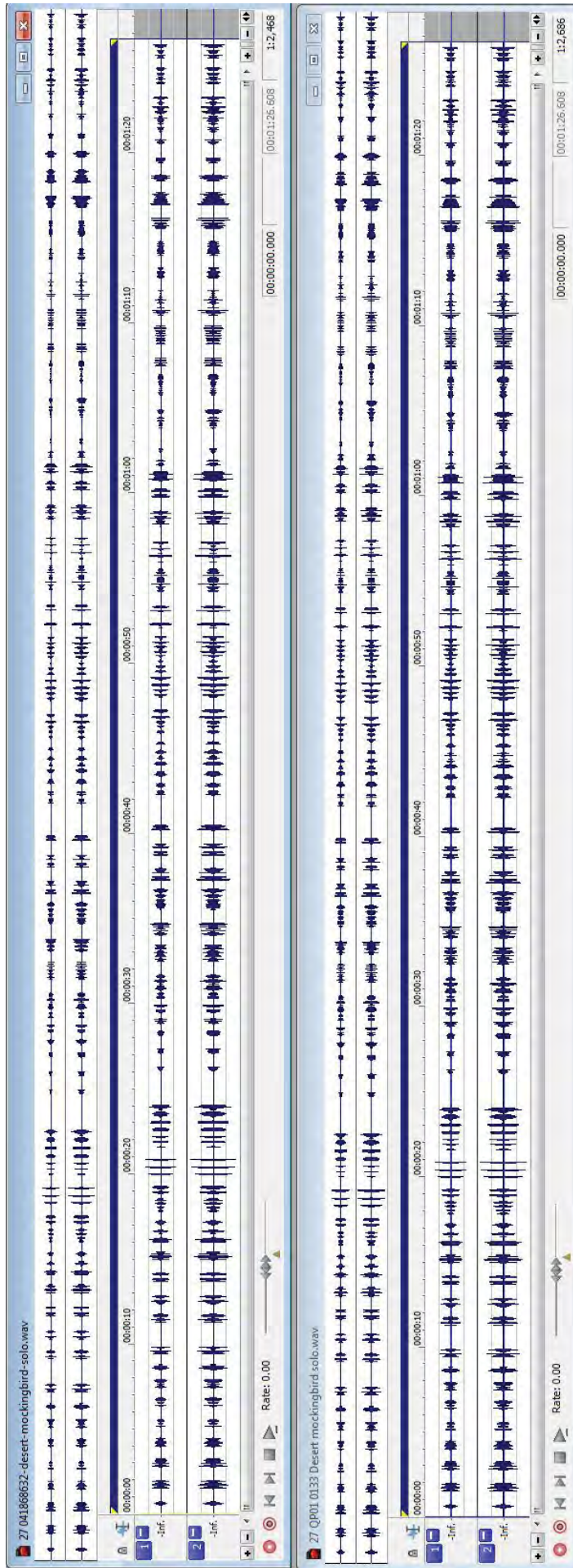
HEMP000607

#26

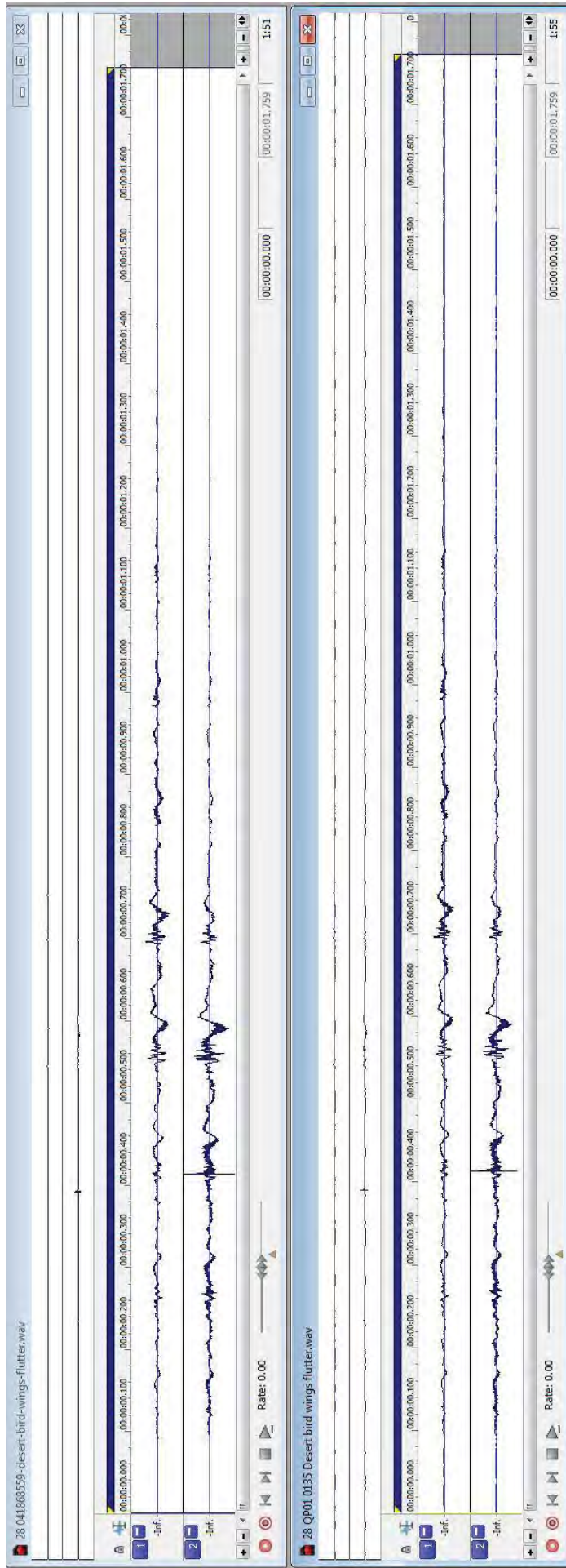


HEMP000608

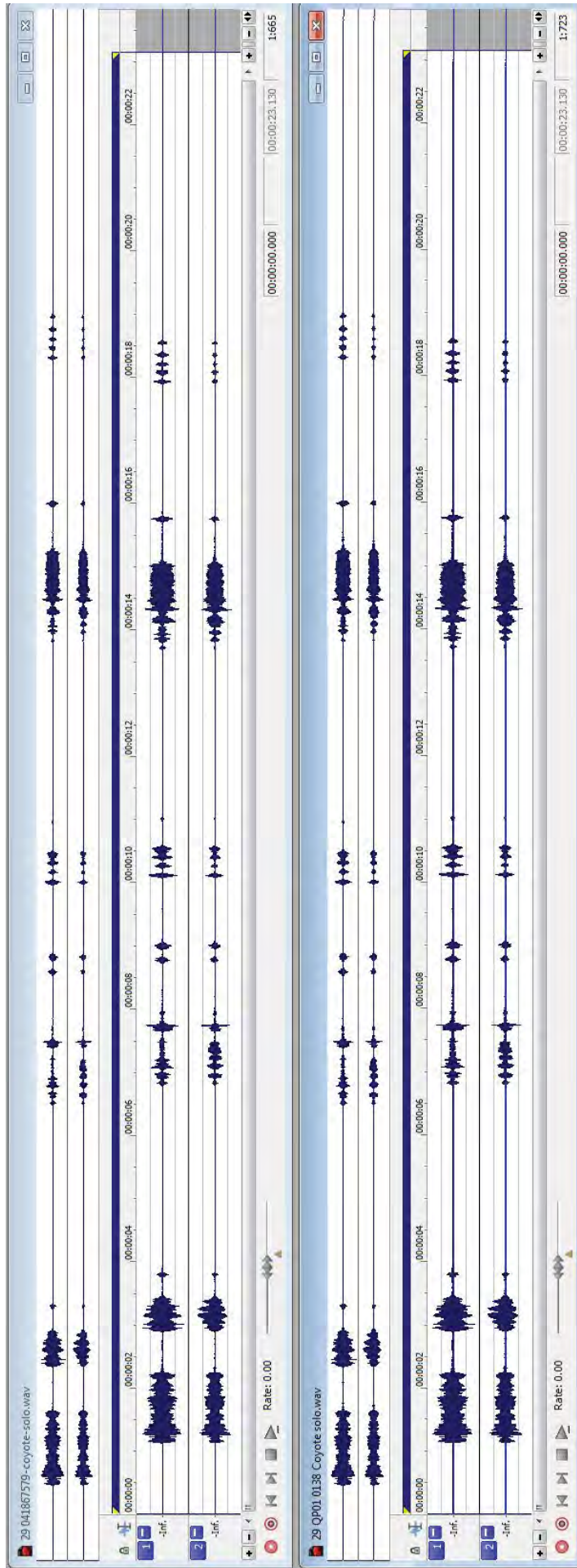
#27



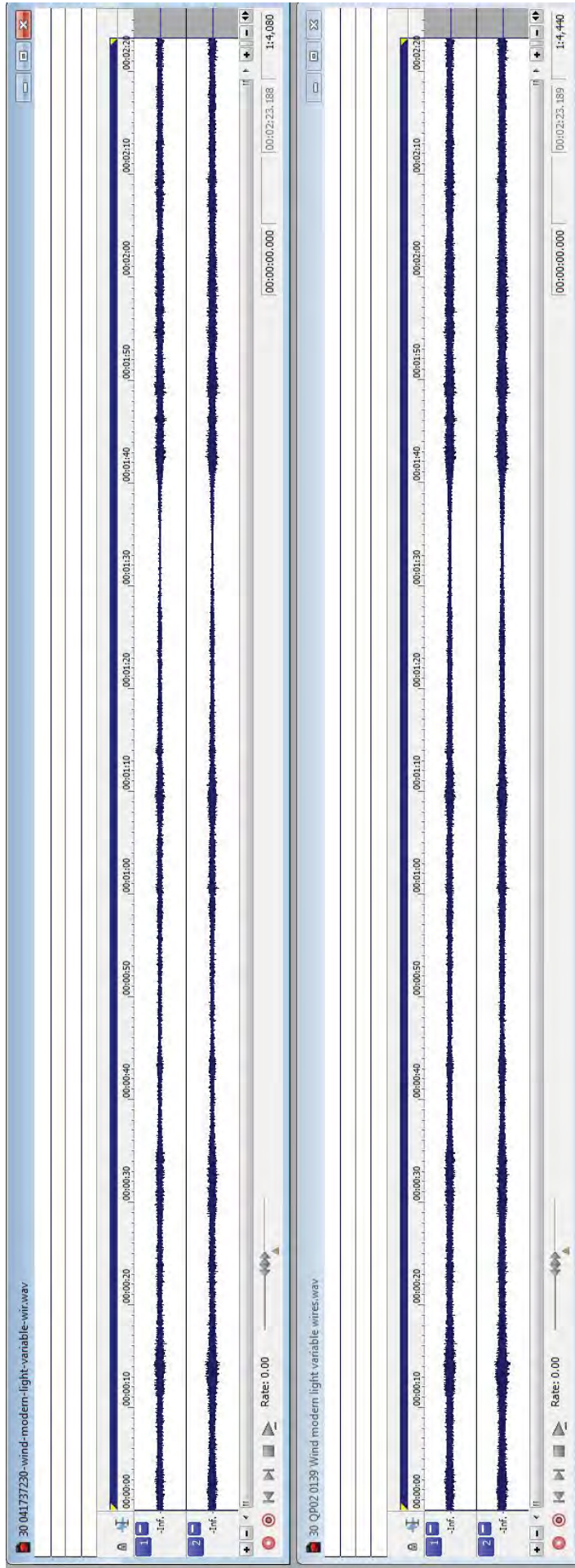
#28



#29

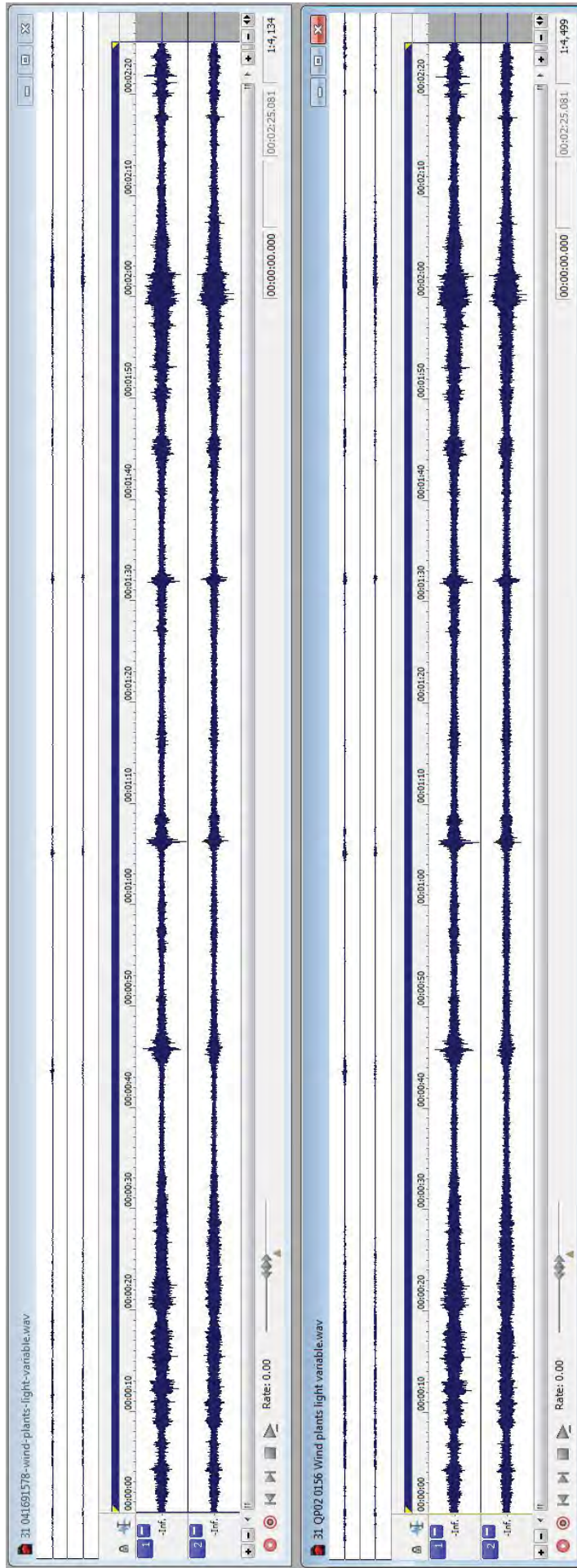


#30



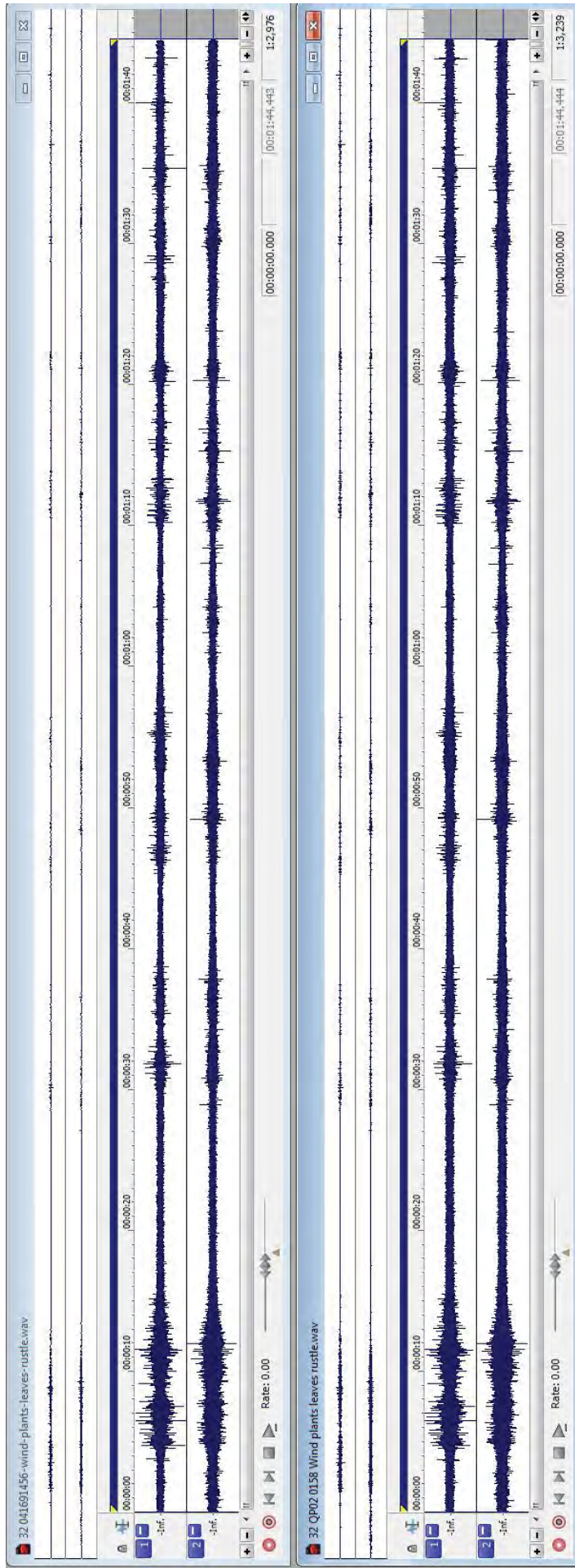
HEMP0000612

#31

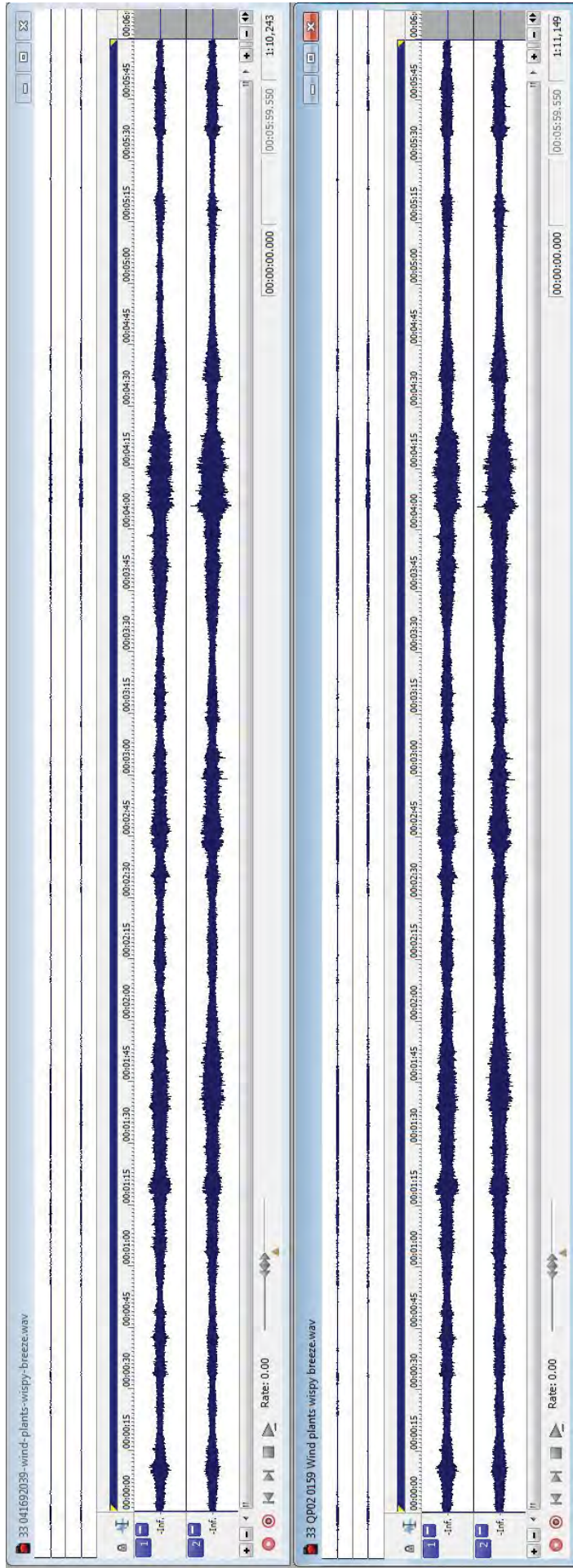


HEMP0000613

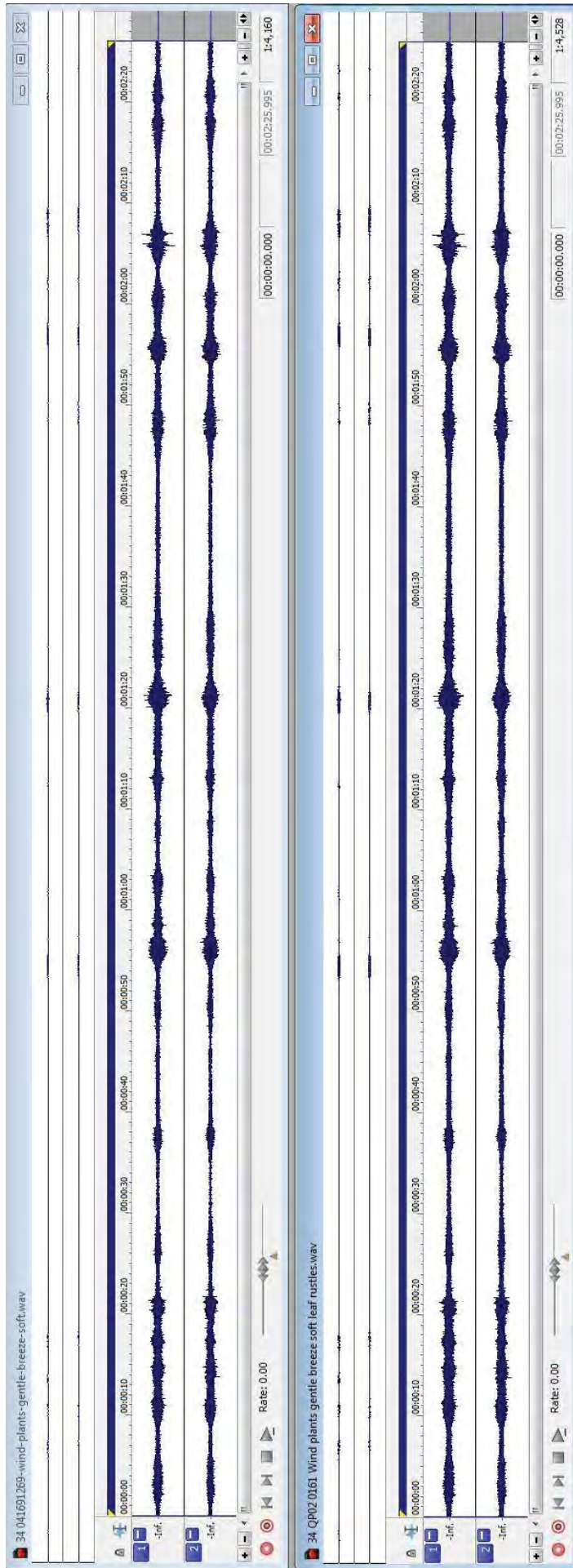
#32



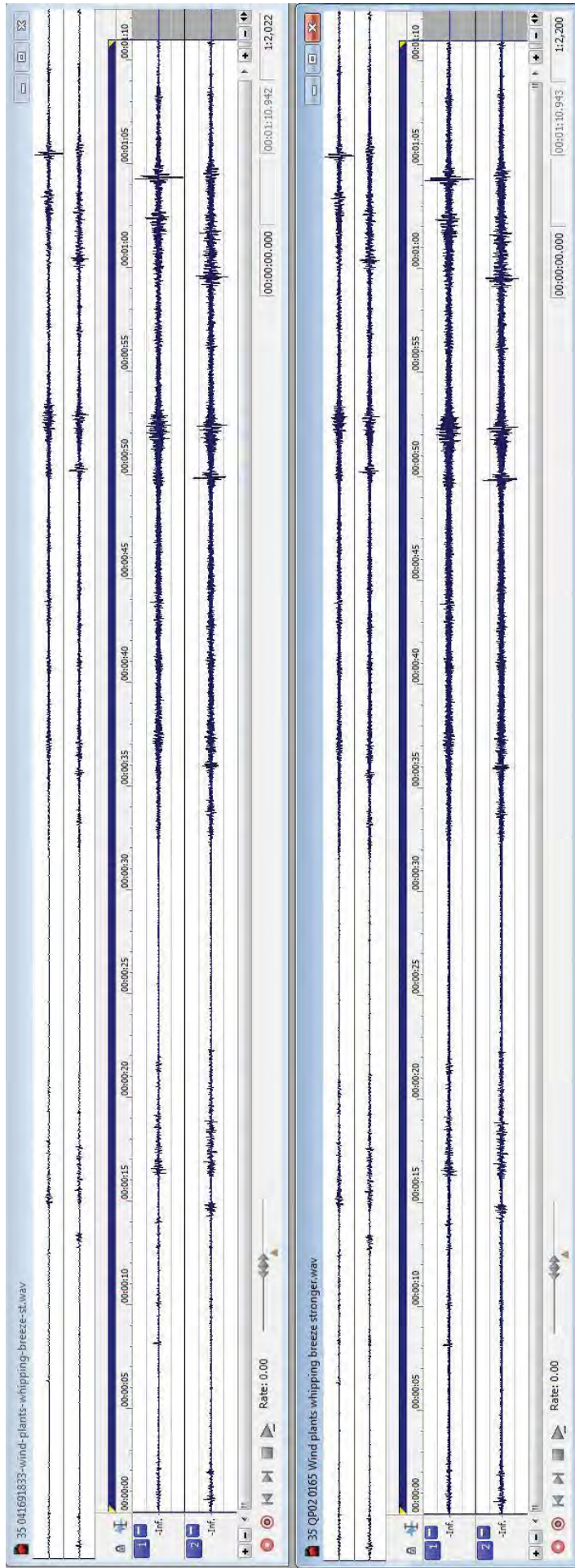
#33



#34

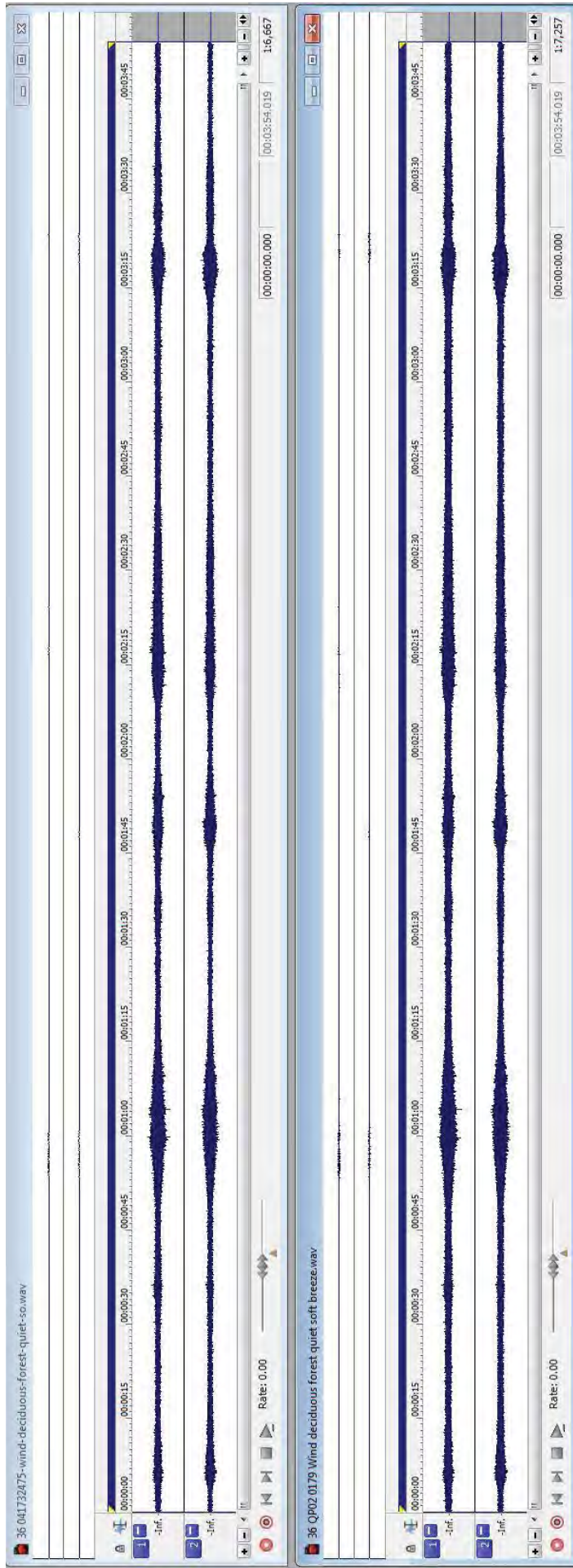


#35

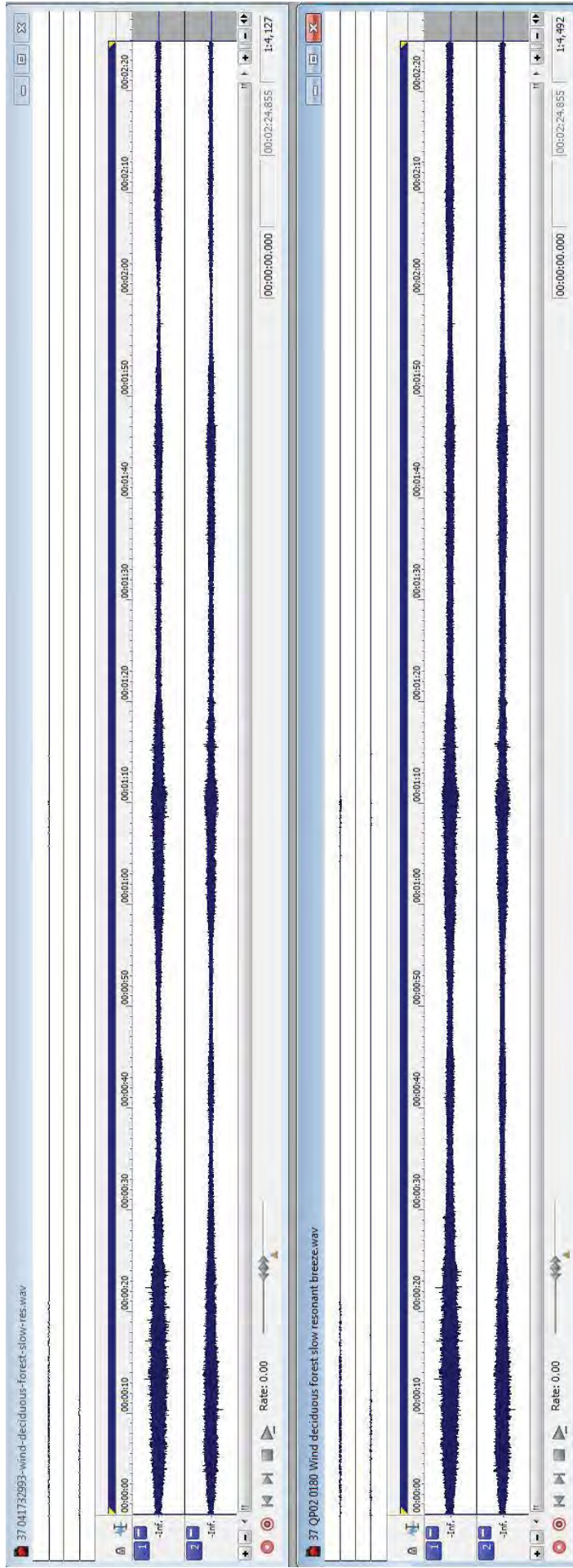


HEMP000617

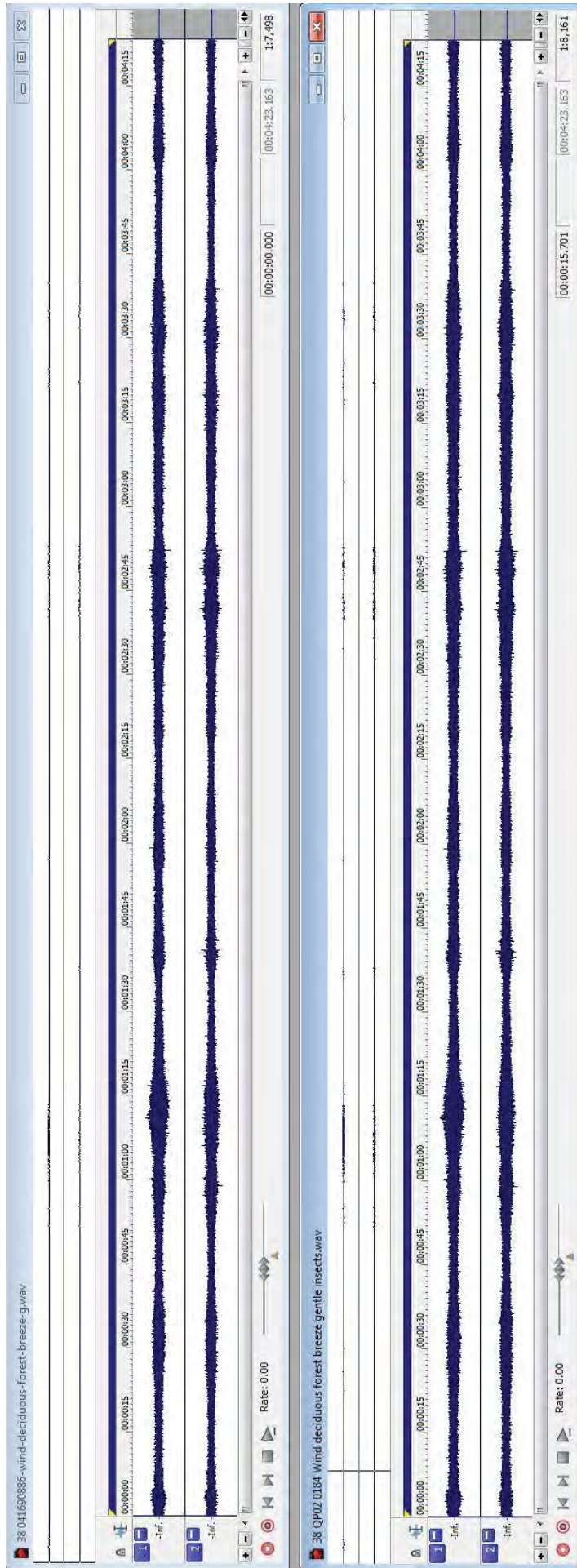
#36



#37

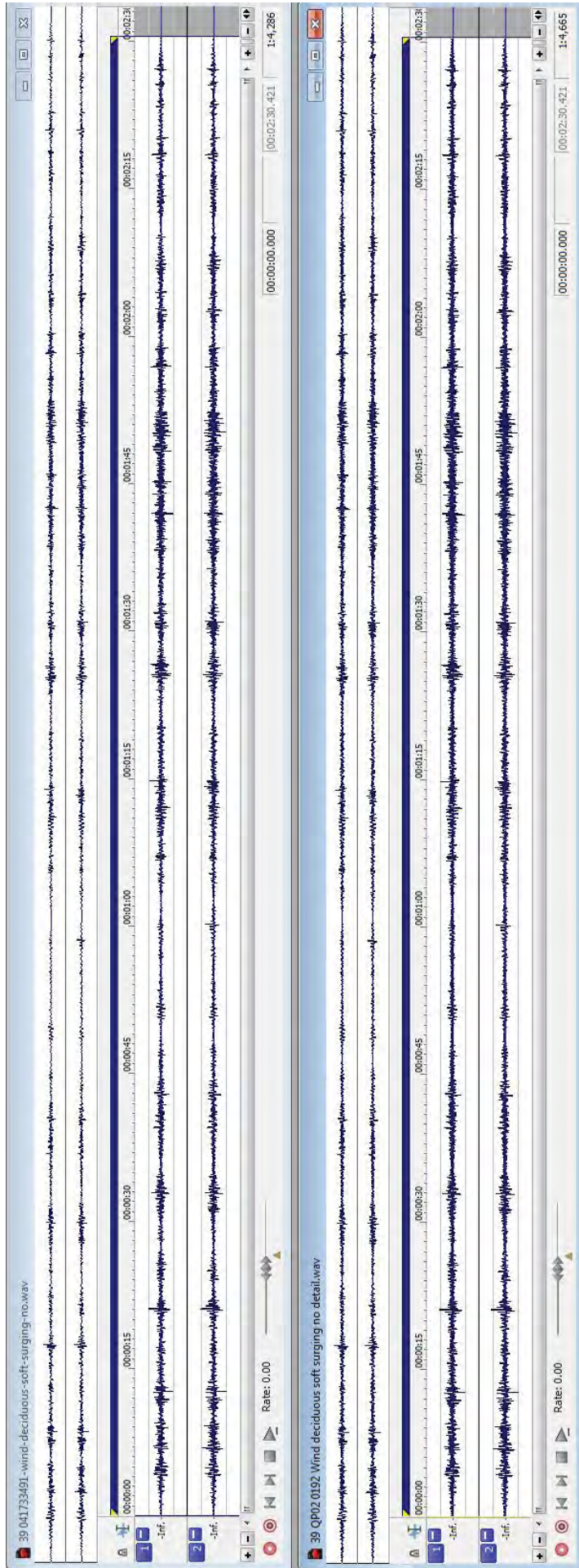


#38

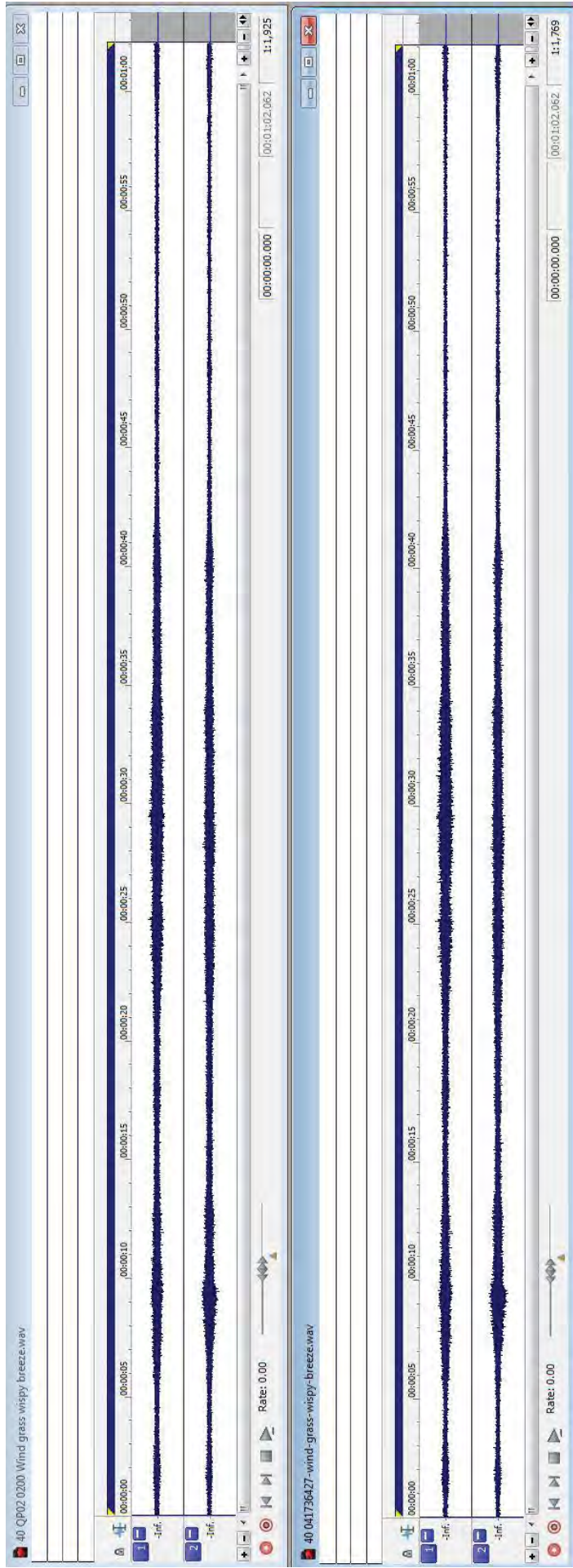


HEMP0000620

#39

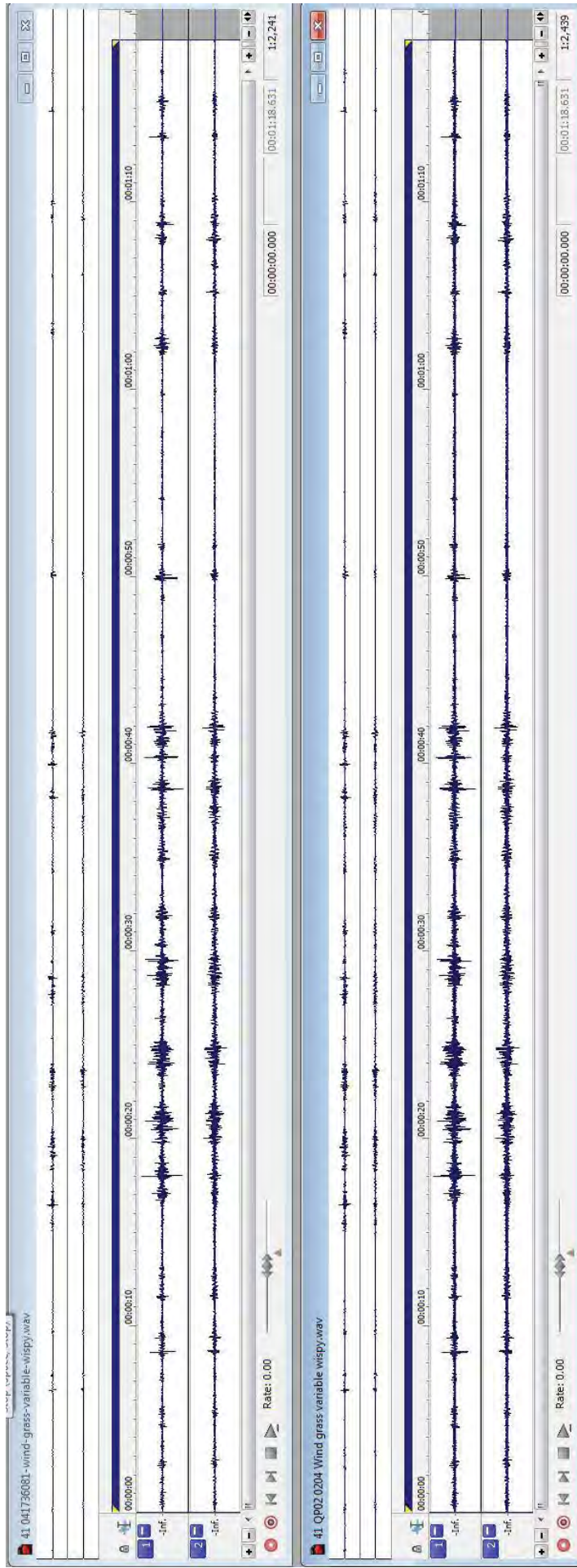


#40

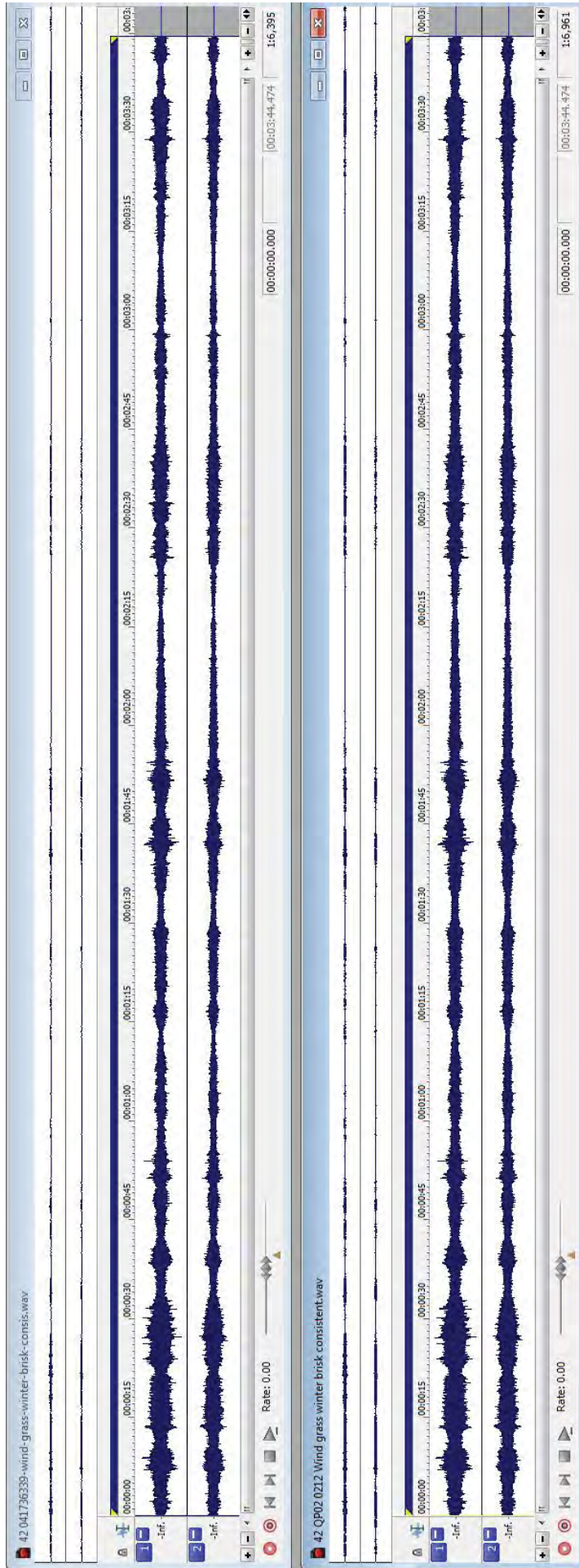


HEMP0000622

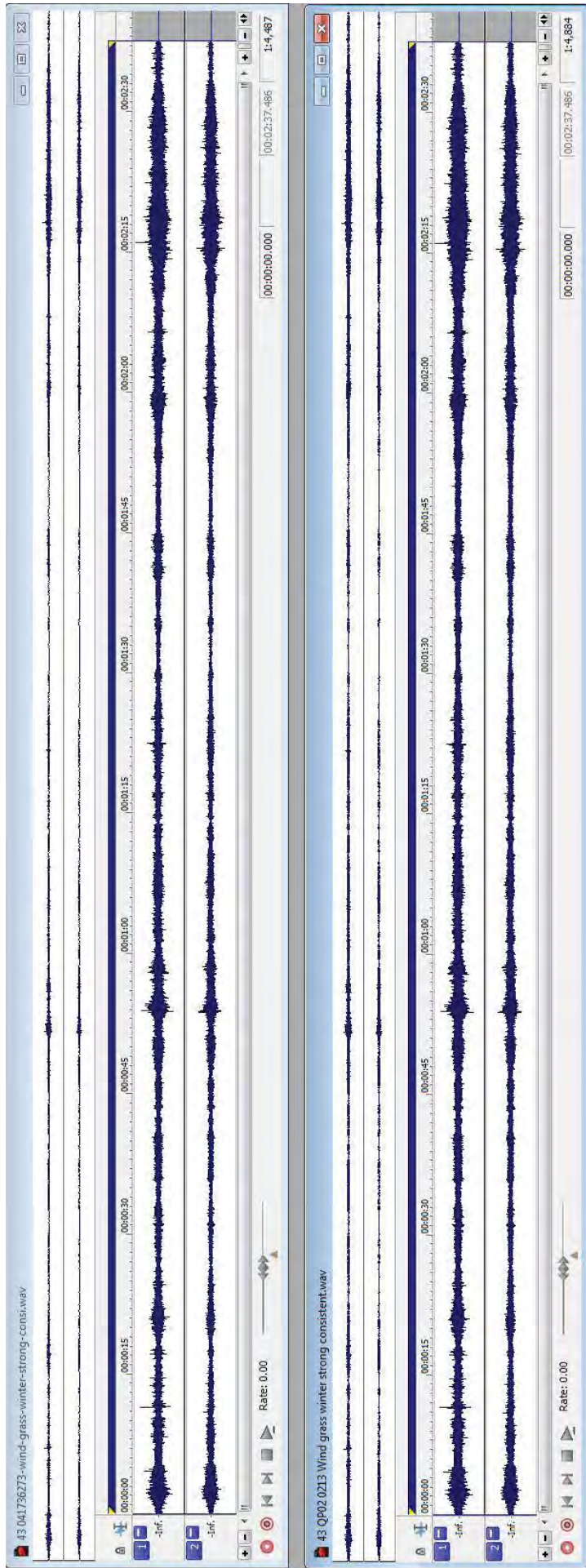
#41



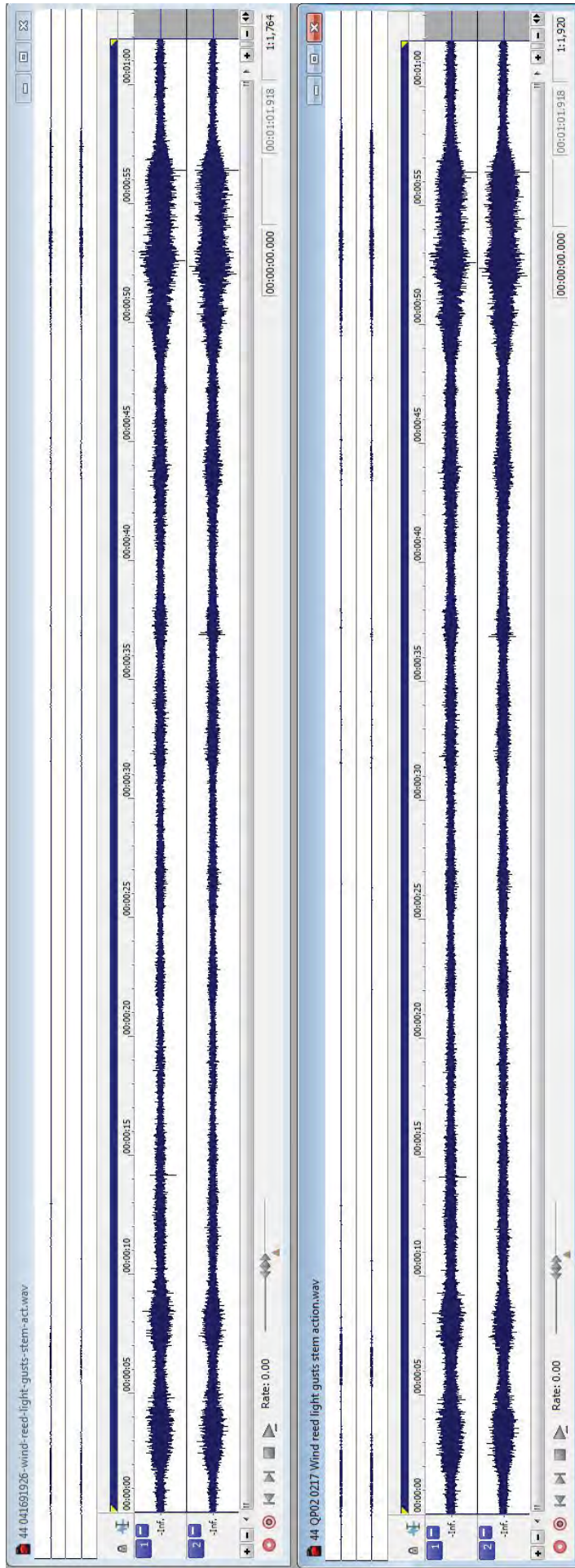
#42



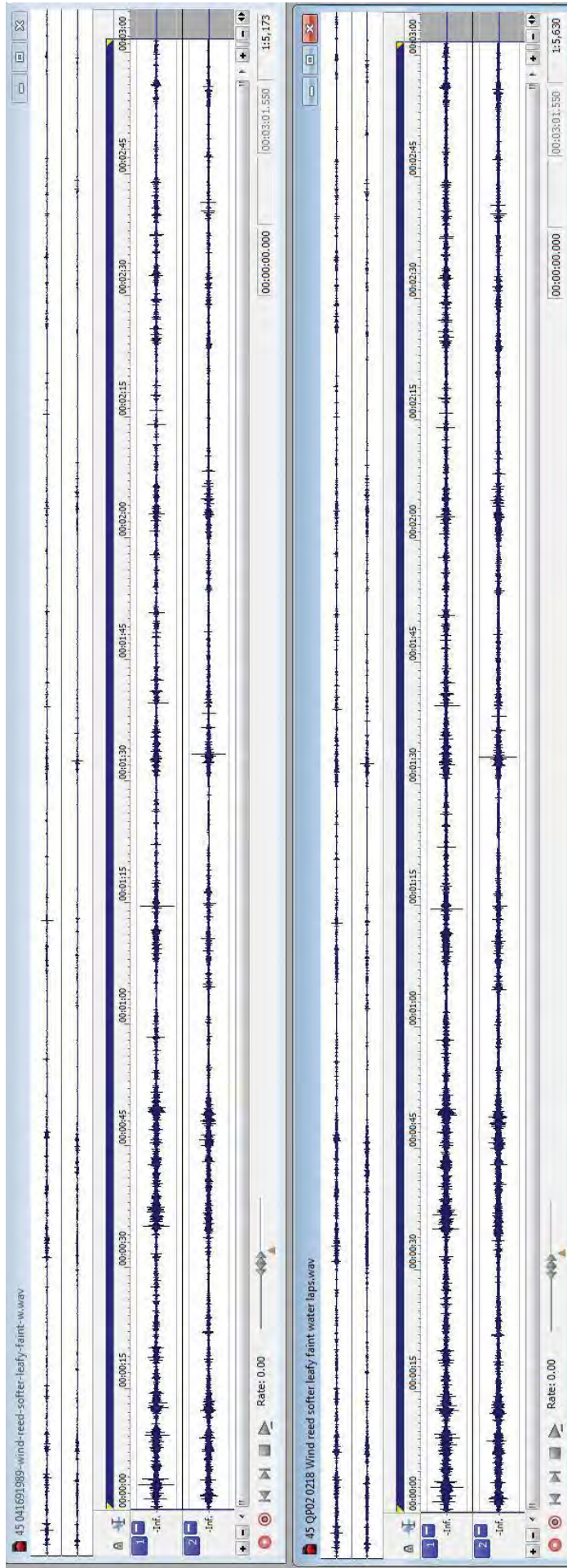
#43



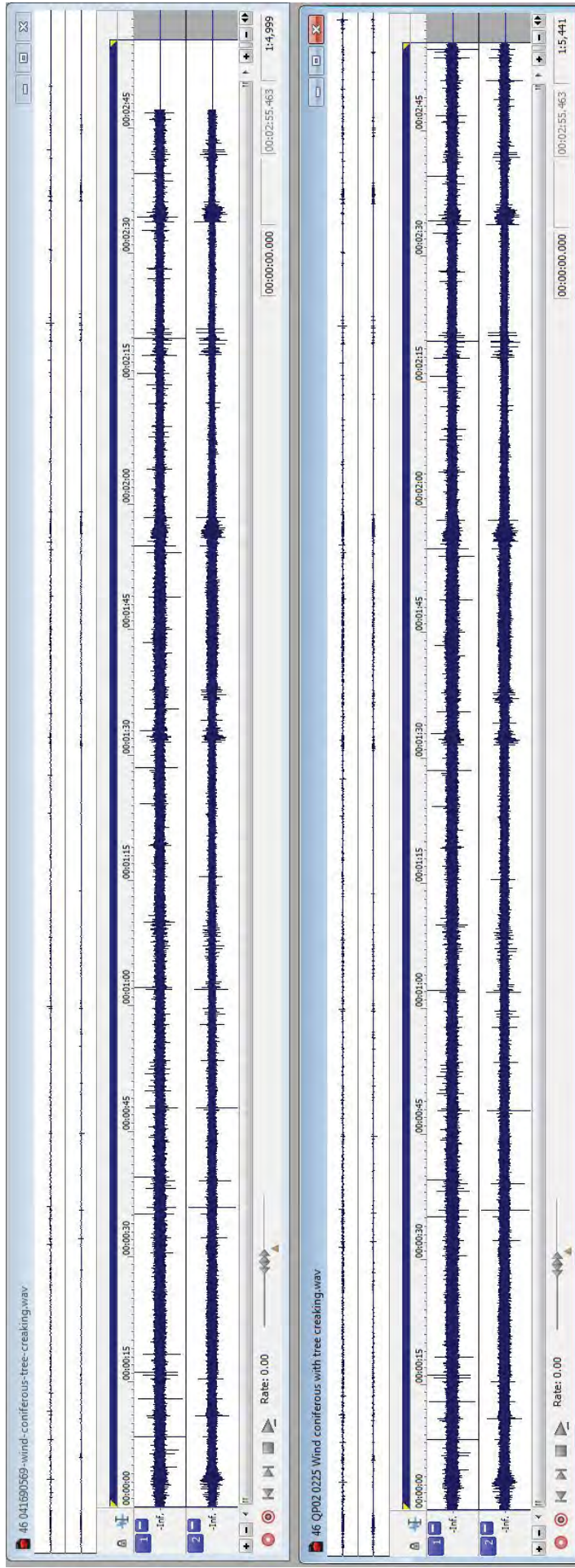
#44



#45

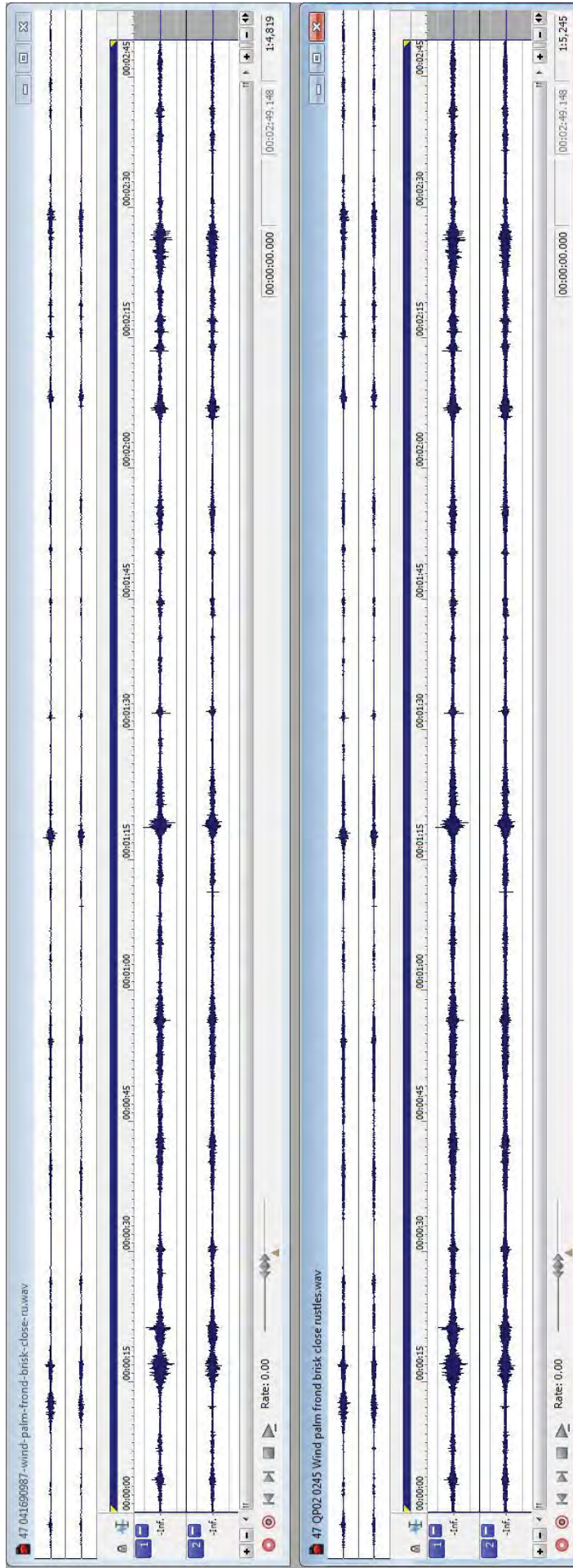


#46

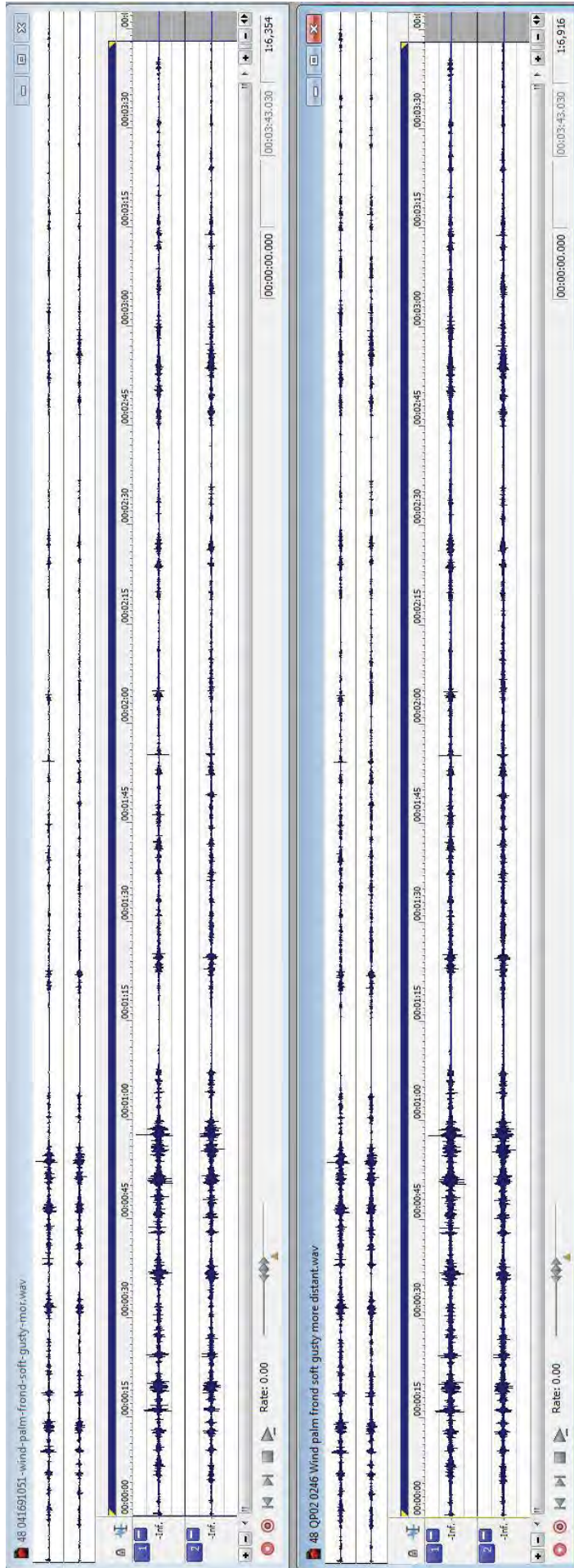


Pond5 file (upper) has muted end section.

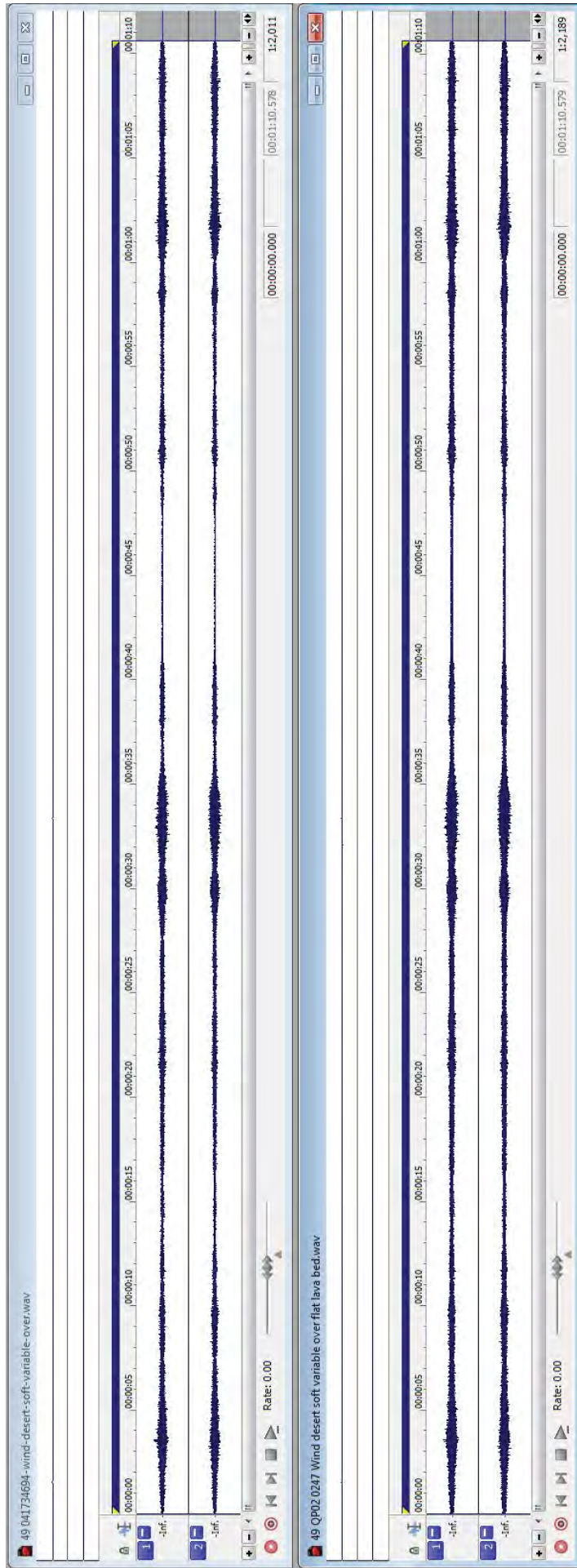
#47



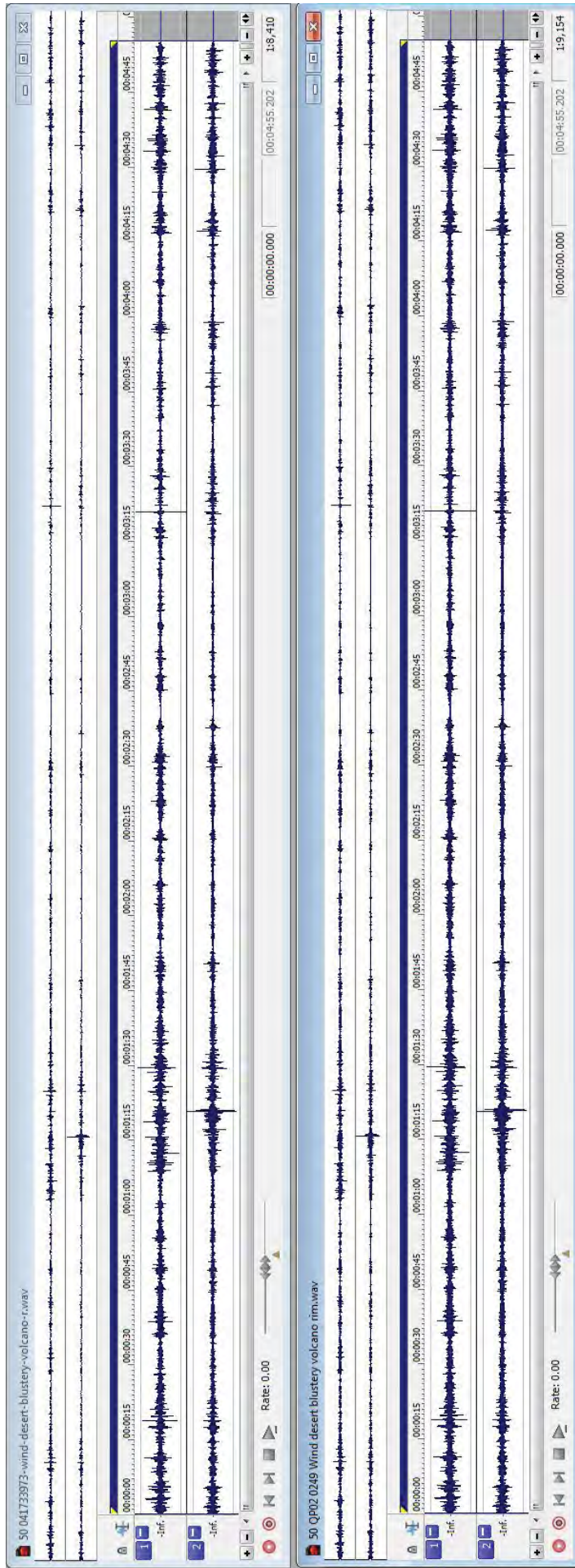
#48



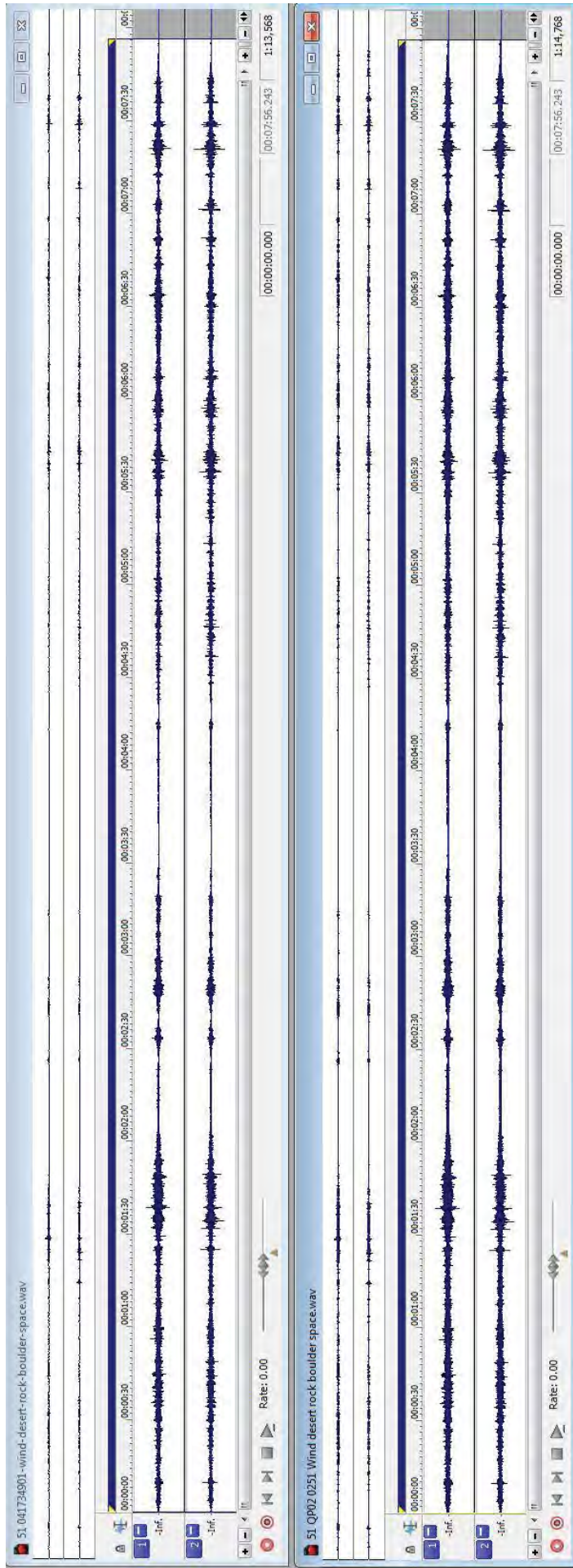
#49



#50

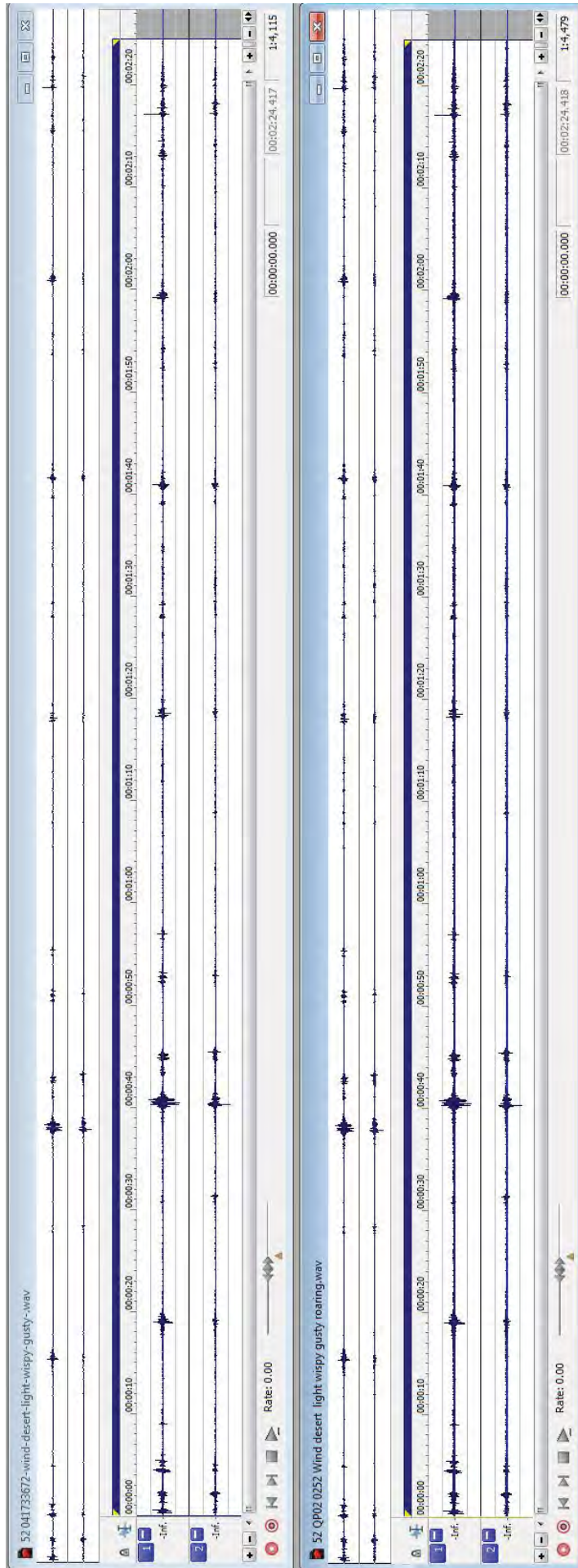


#51

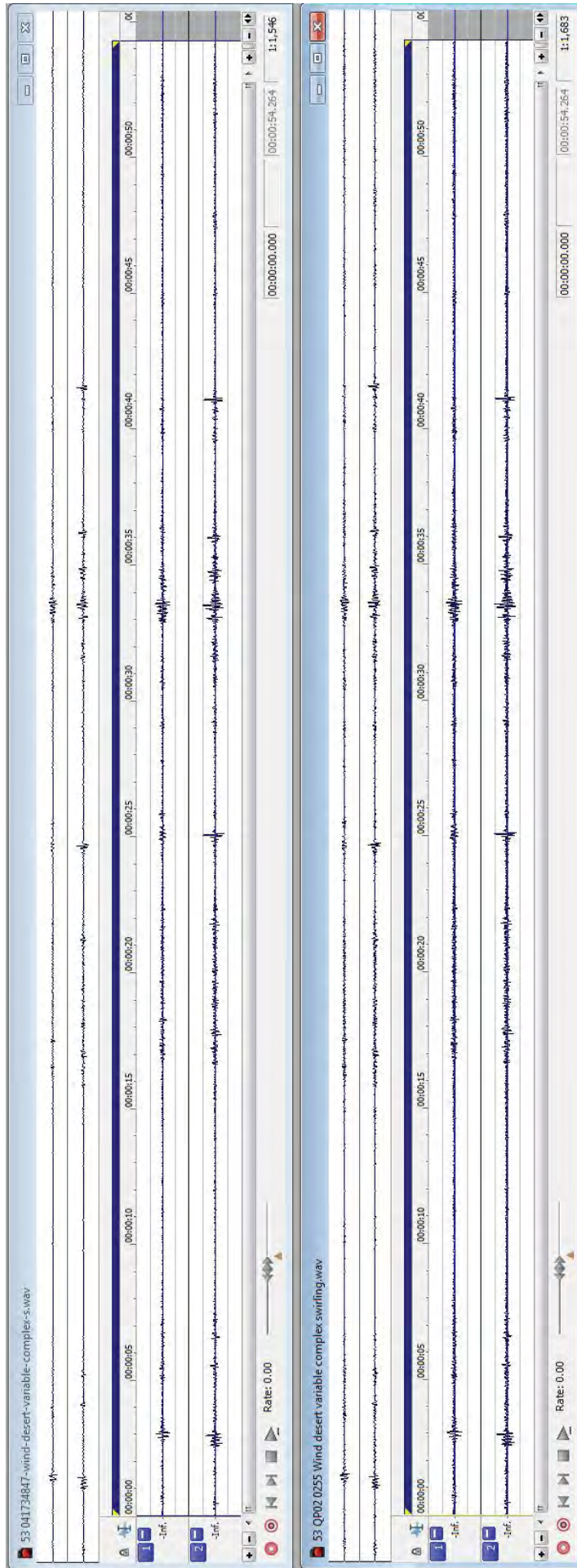


HEMP0000633

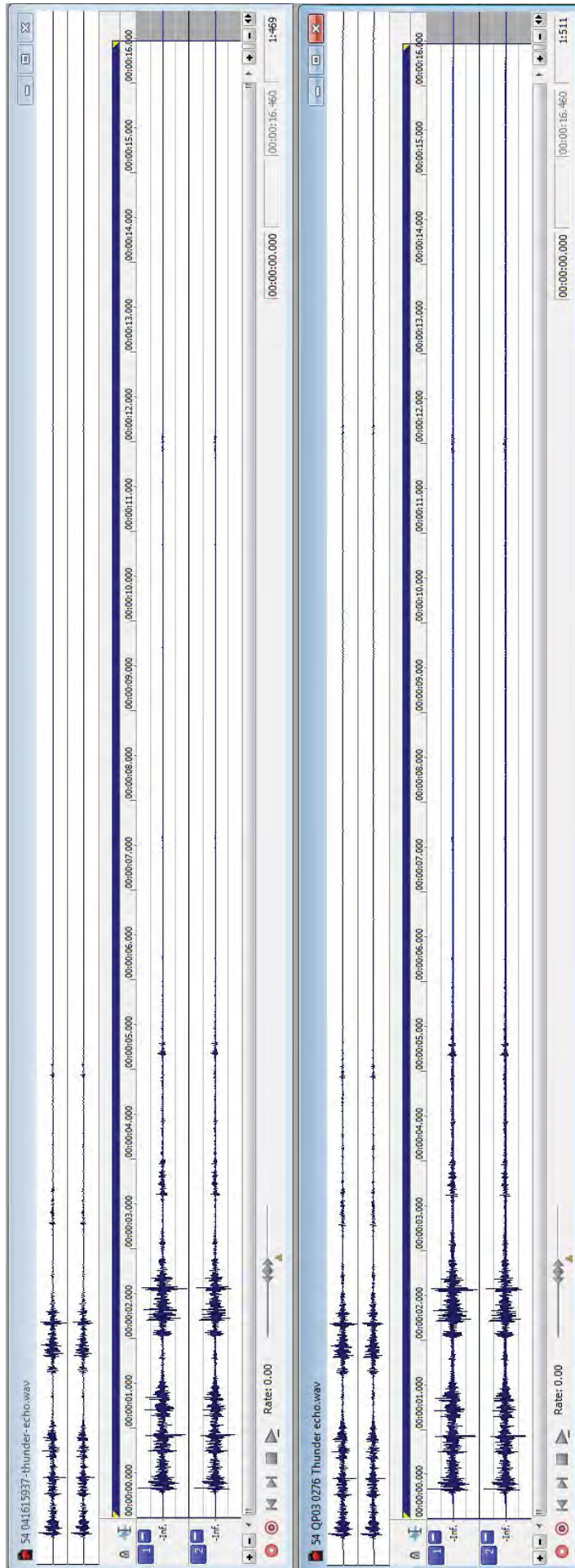
#52



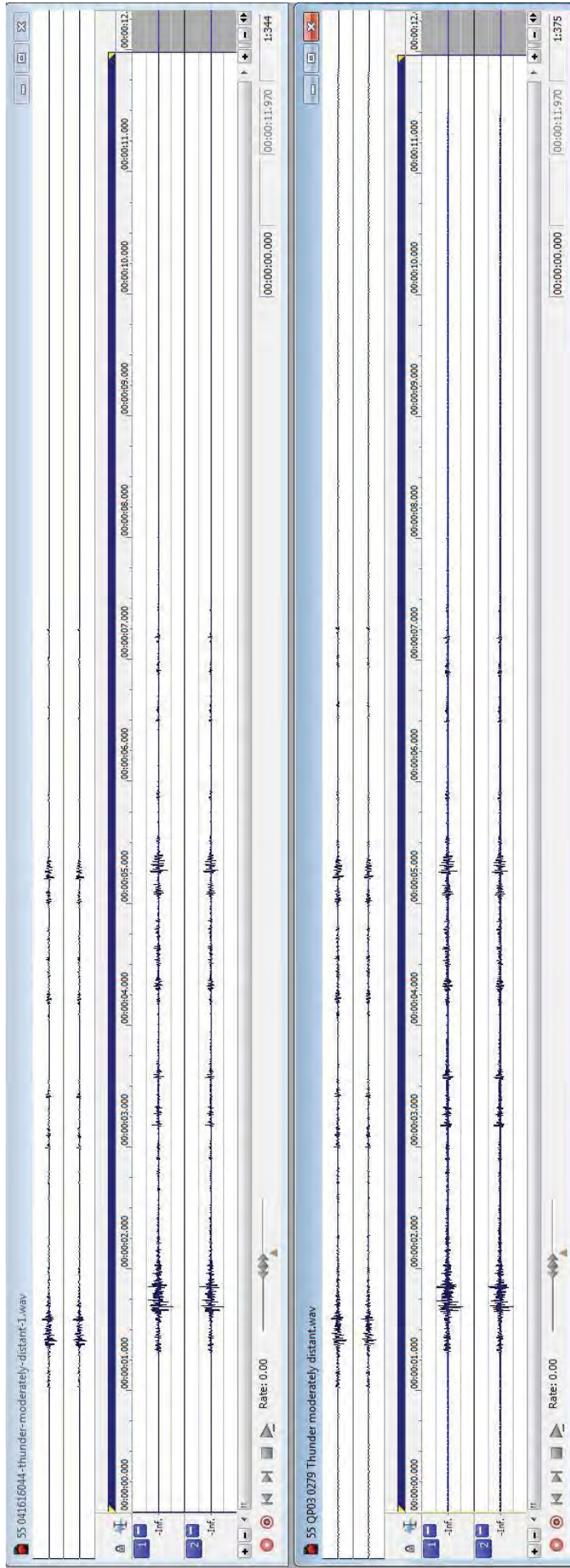
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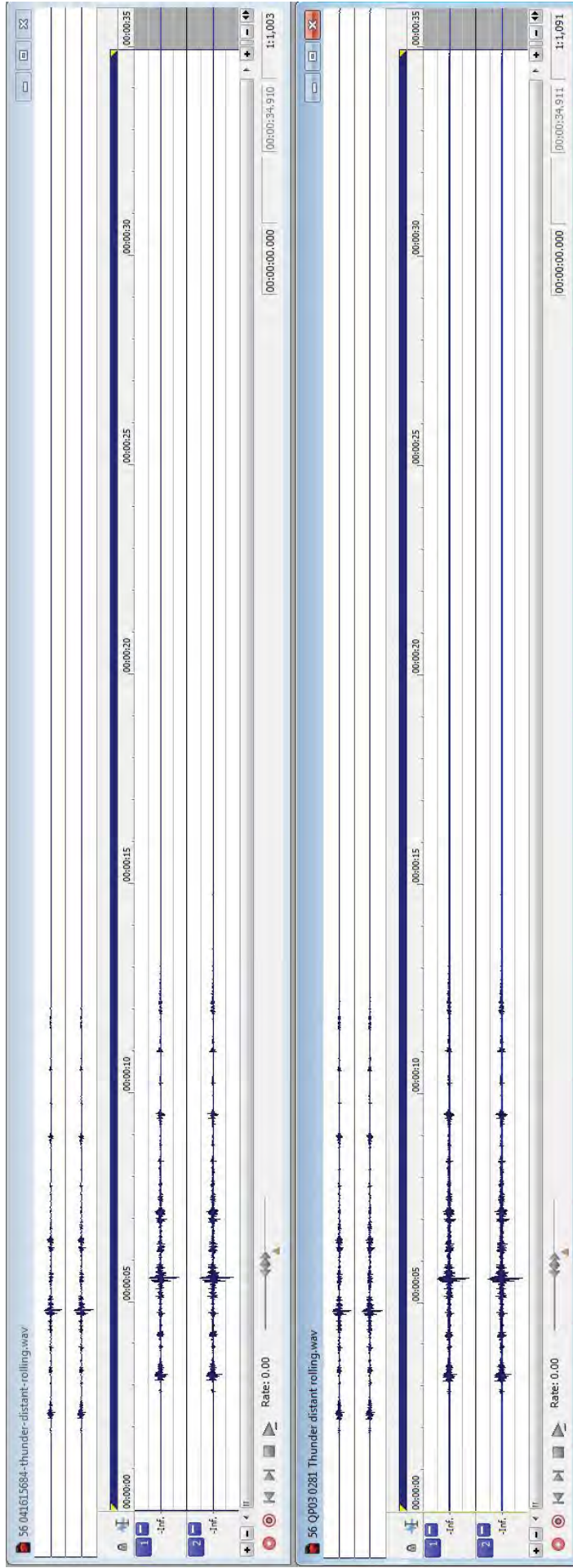
#54



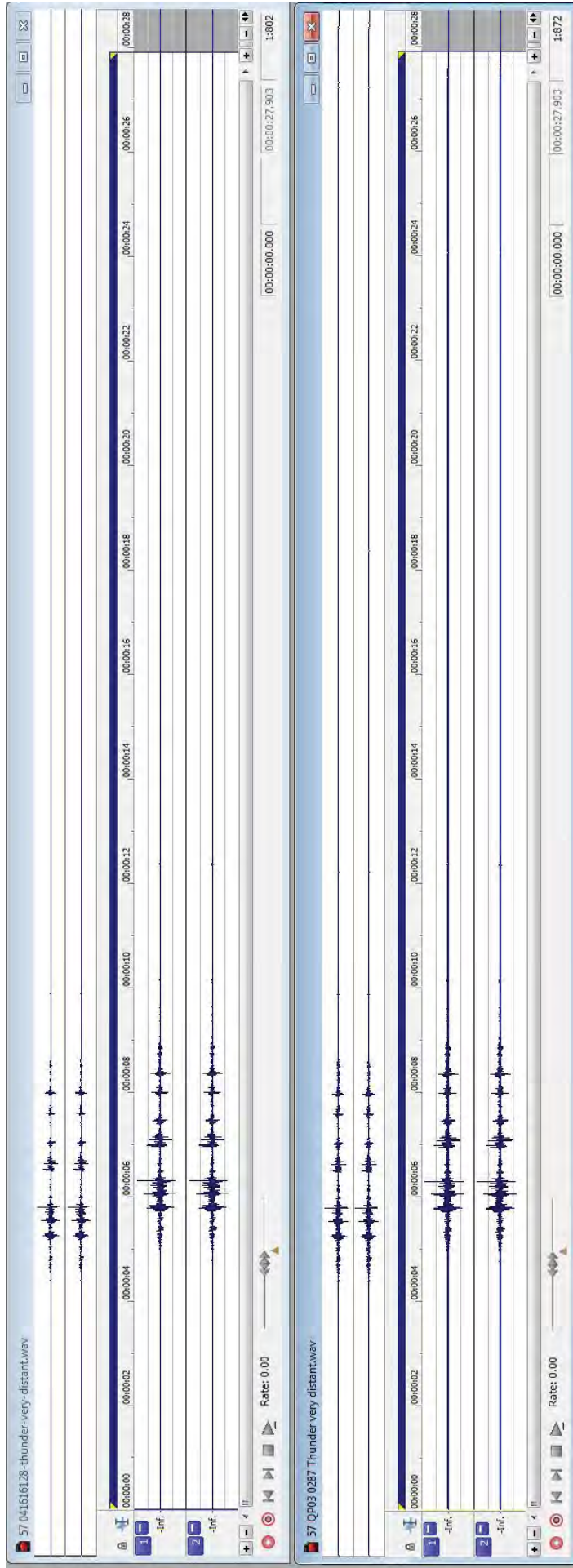
#55



#56

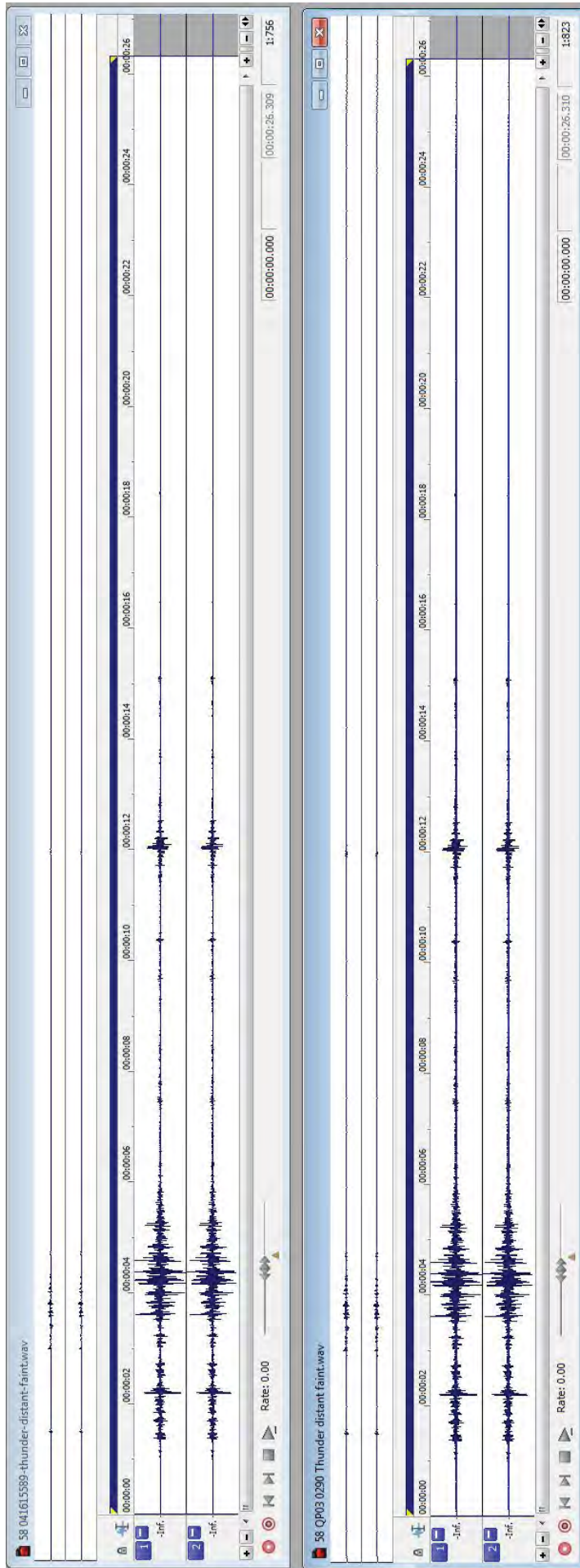


#57

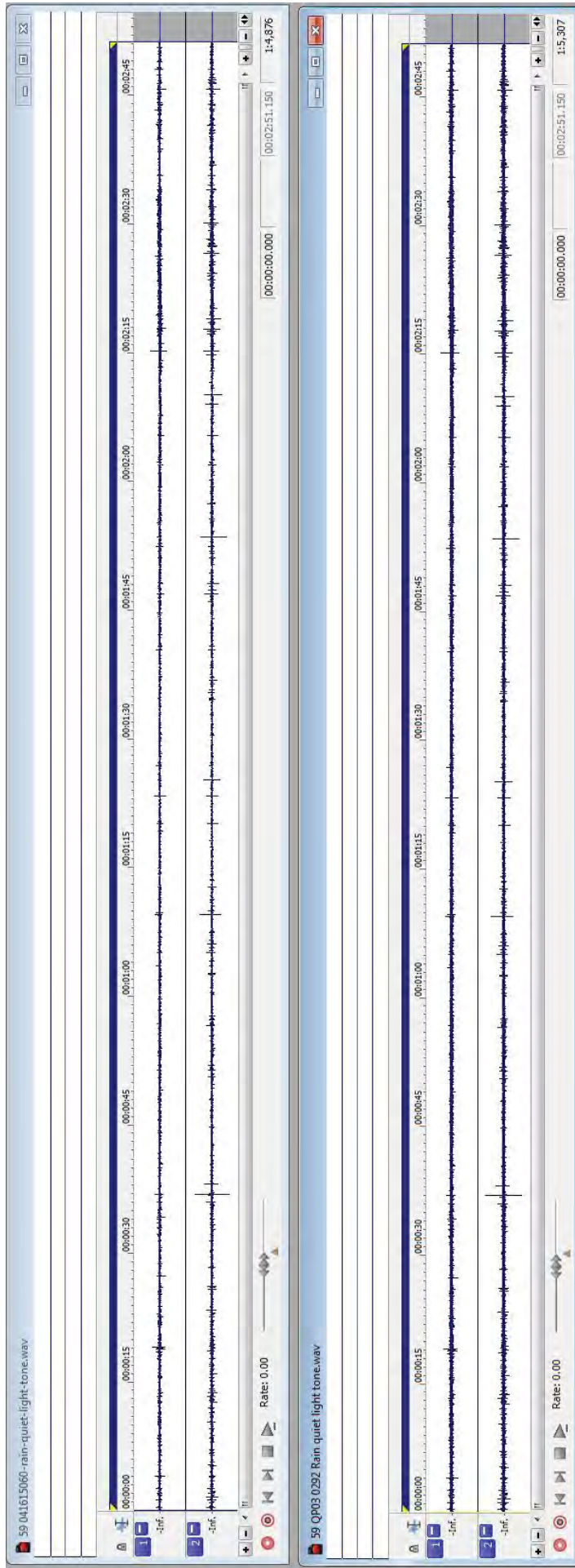


HEMP0000639

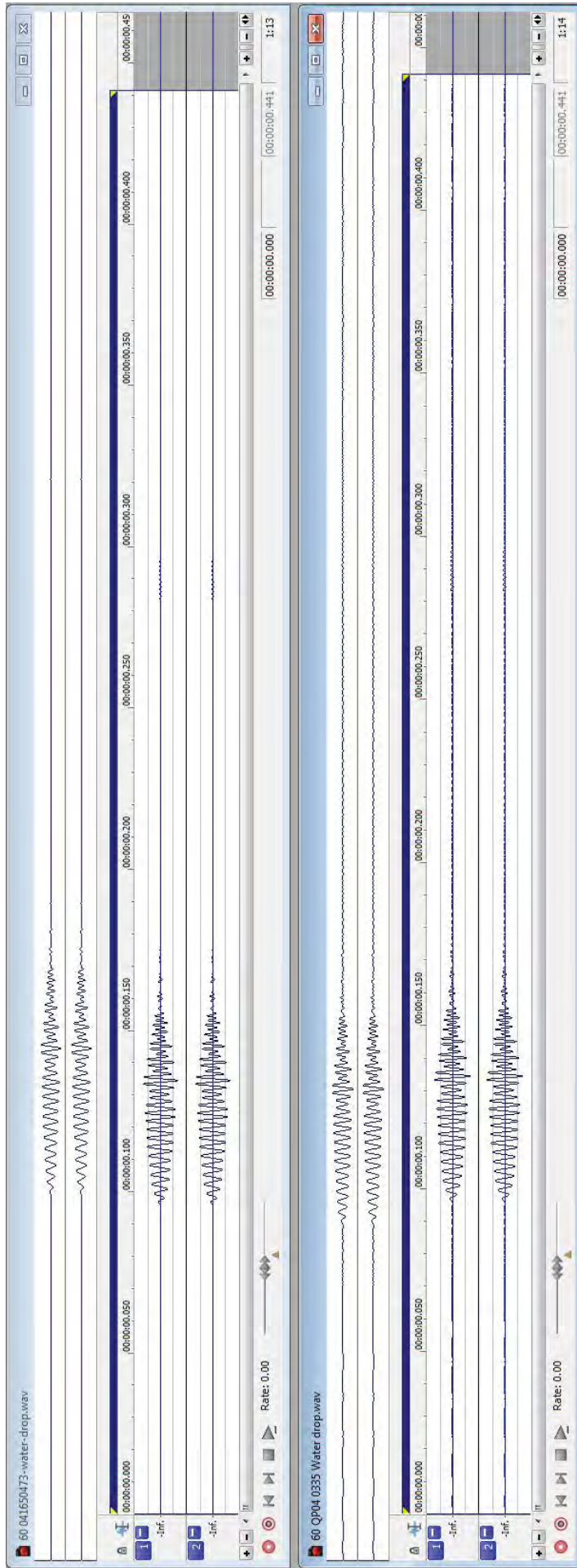
#58



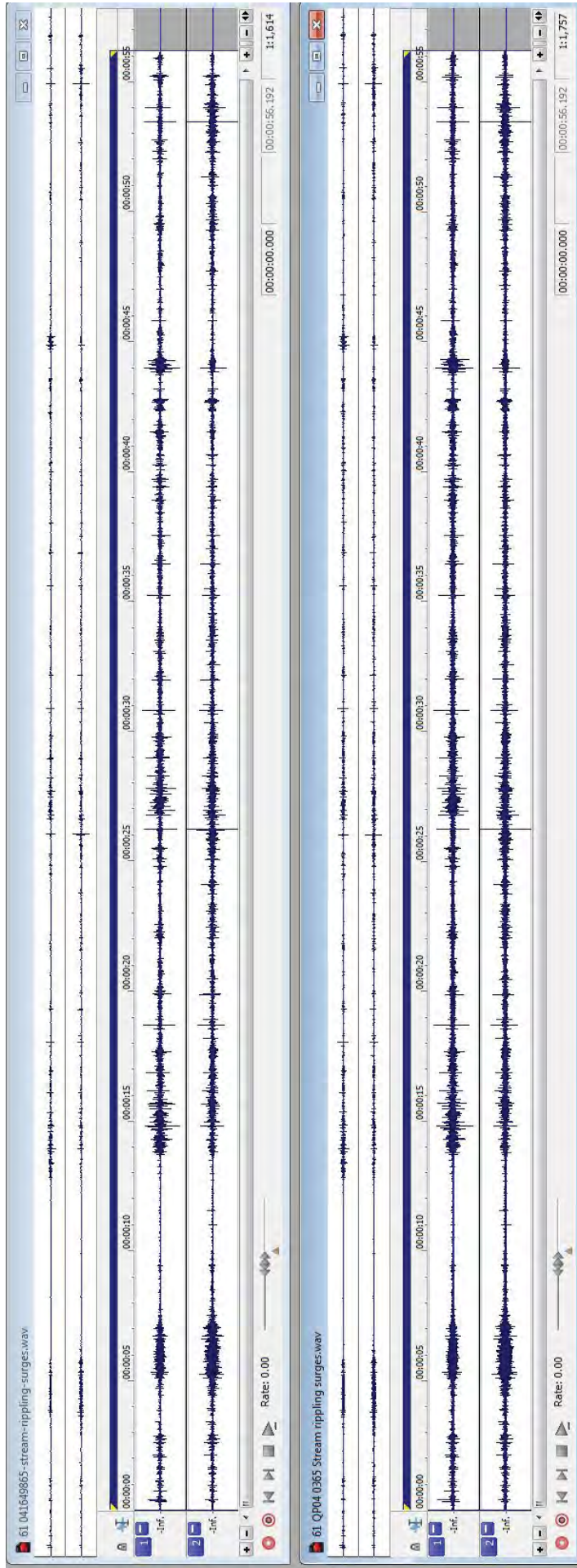
#59



#60

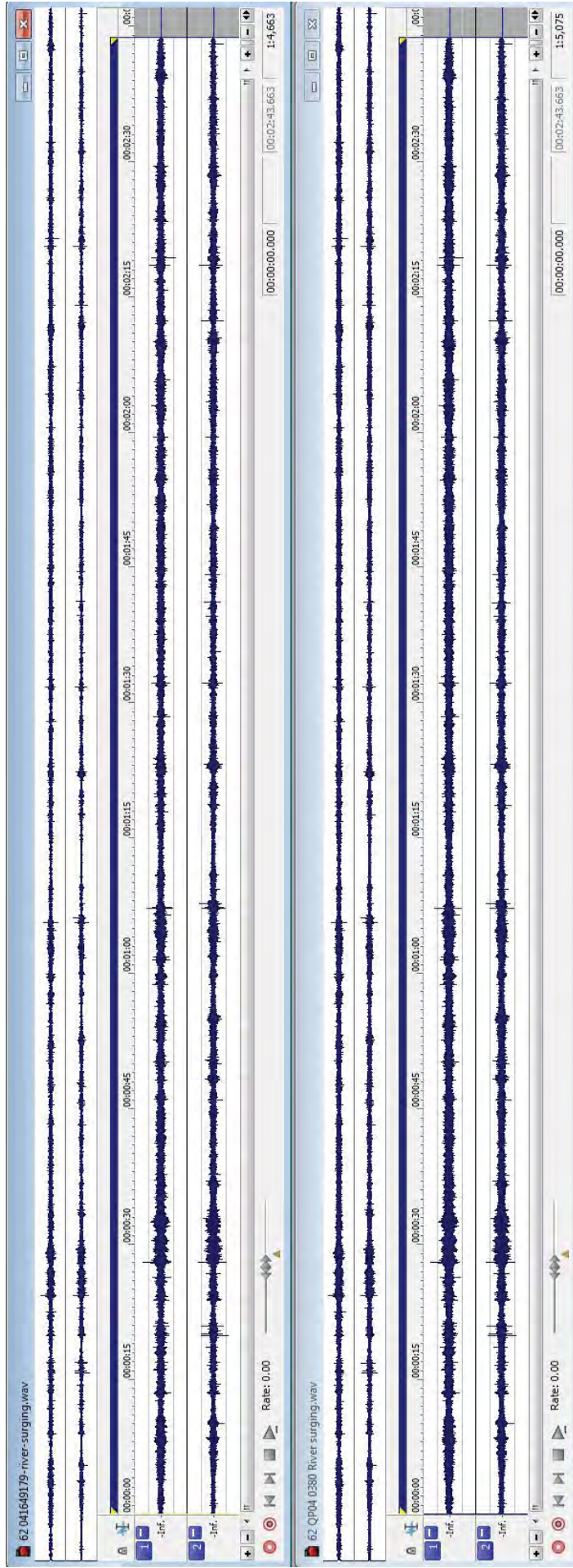


#61



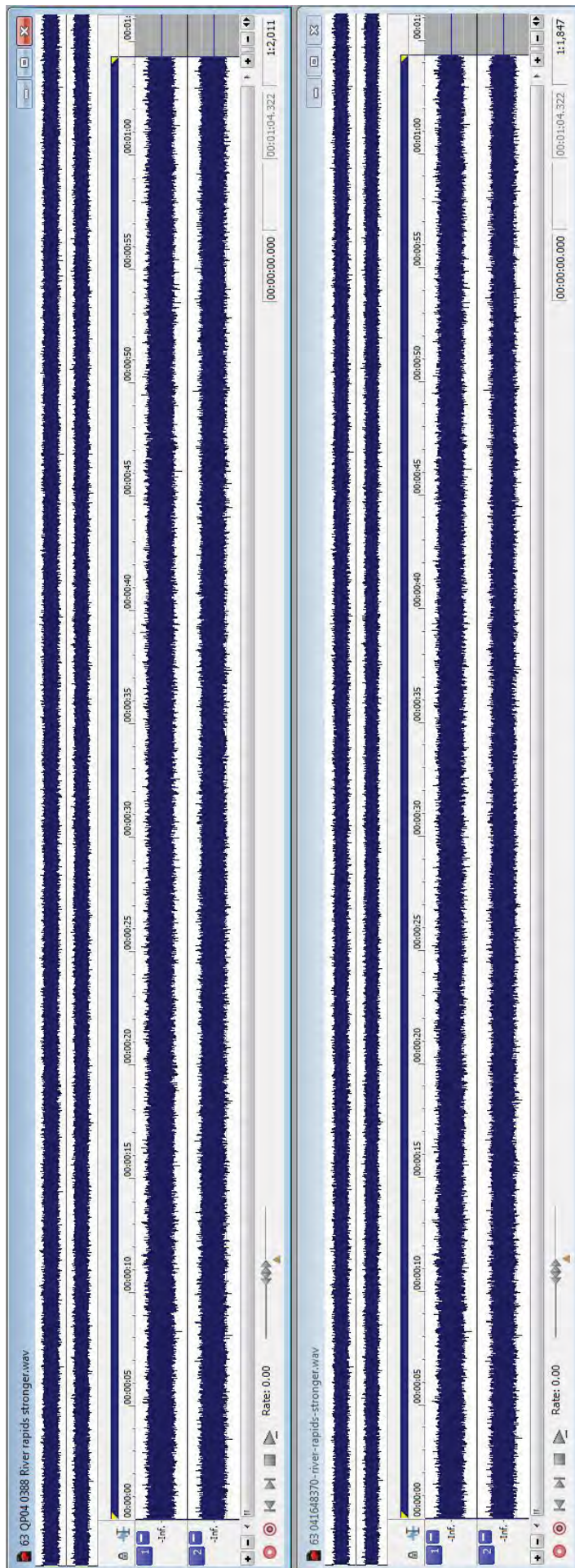
HEMP0000643

#62

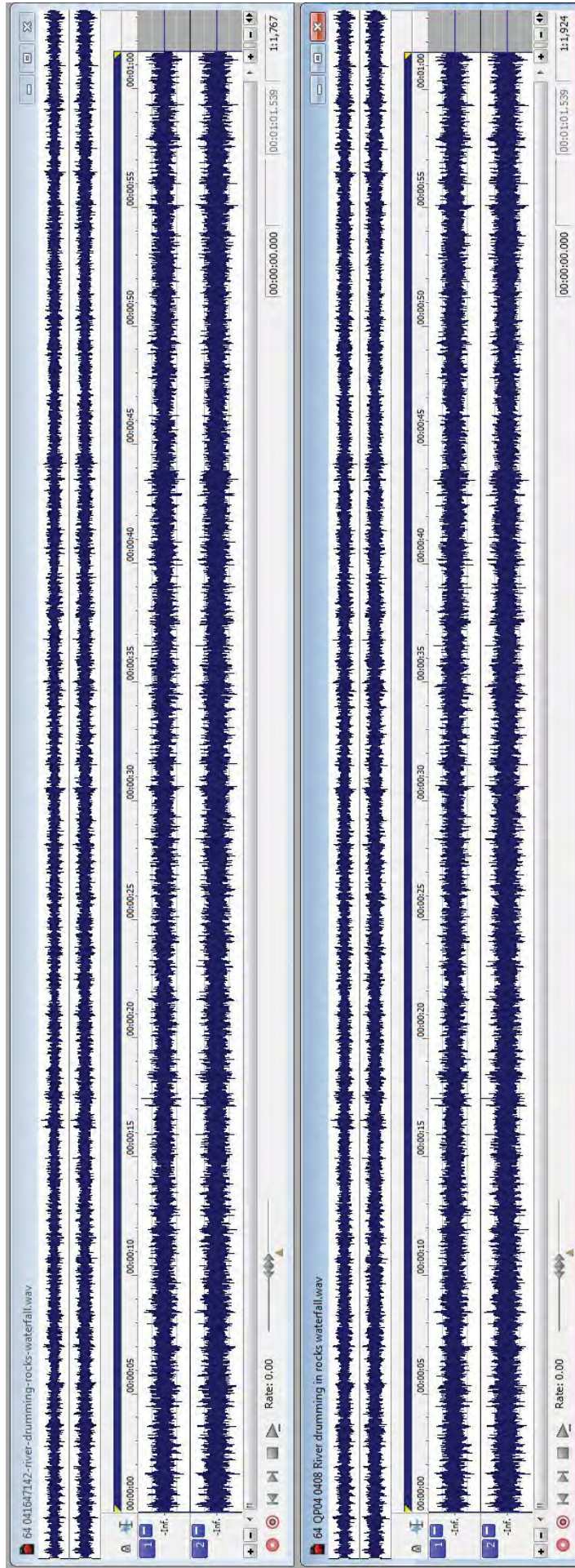


HEMP0000644

#63

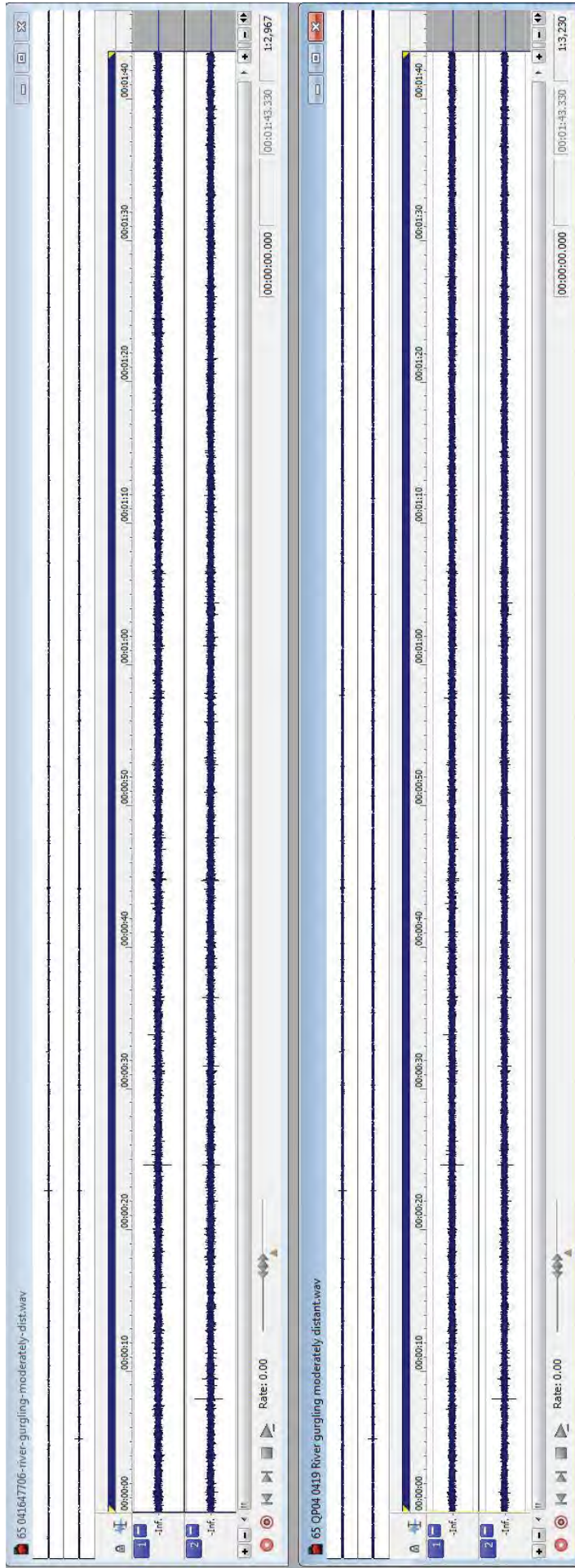


#64



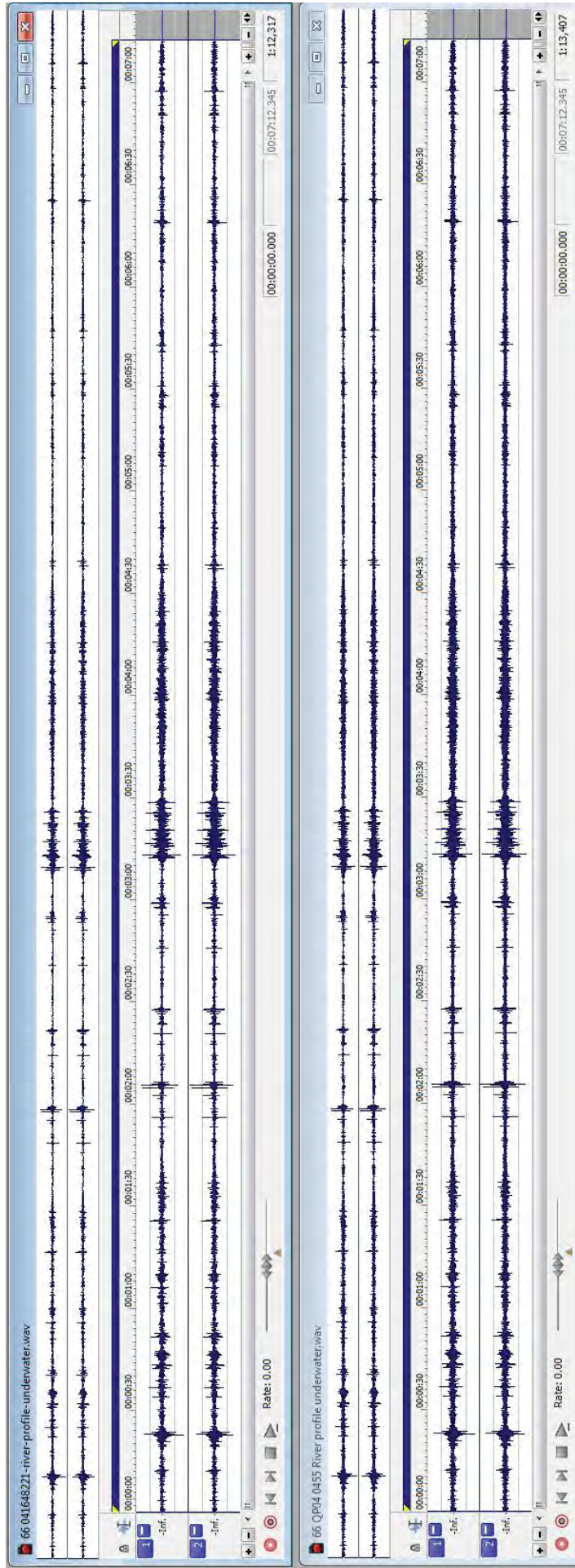
HEMP0000646

#65



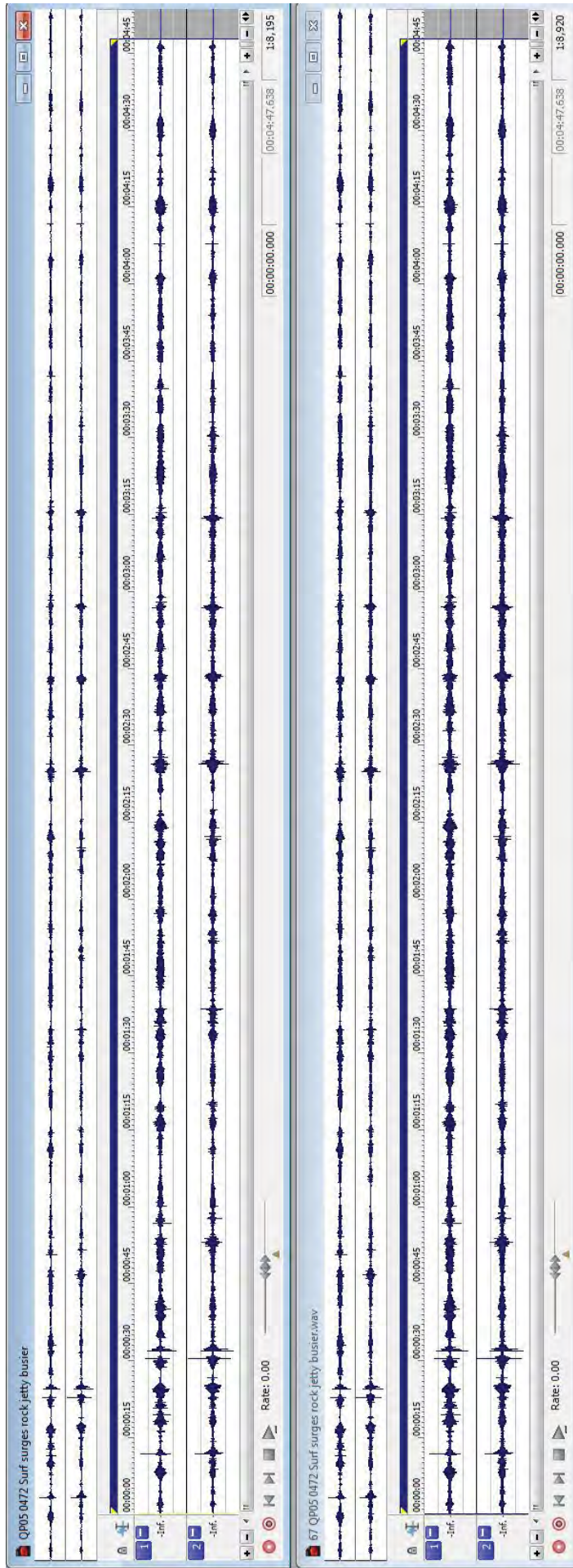
HEMP0000647

#66

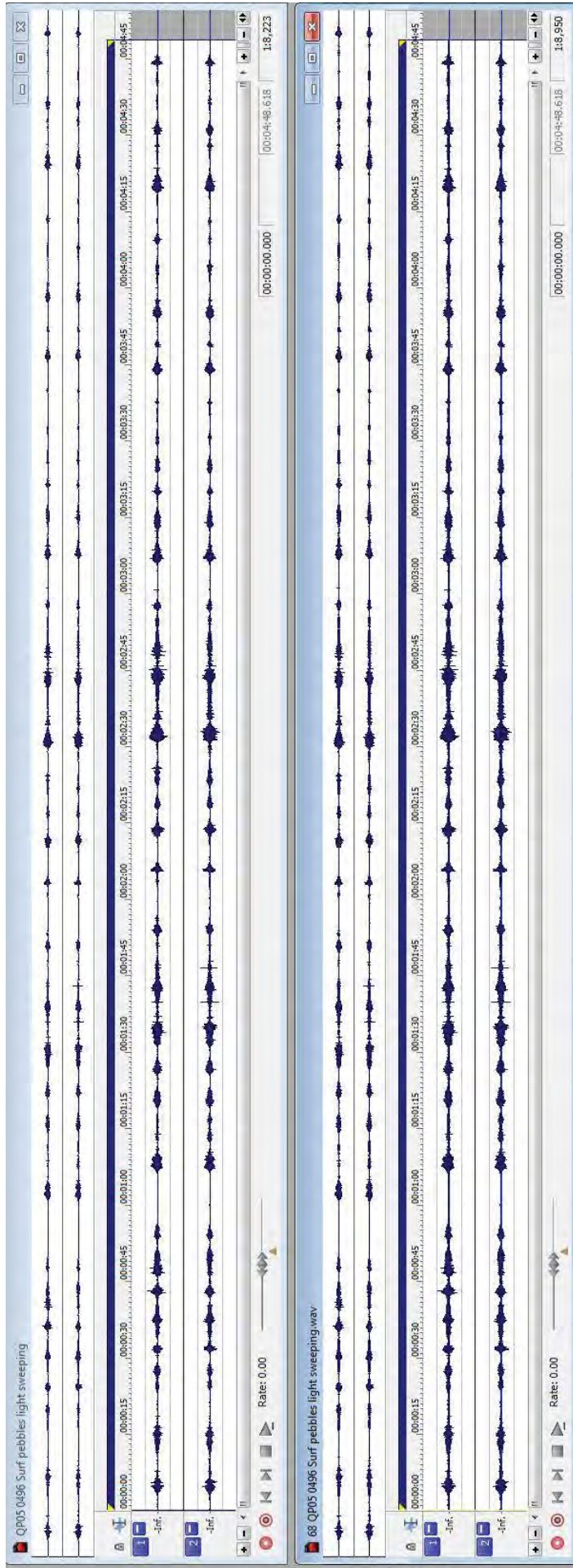


HEMP0000648

#67

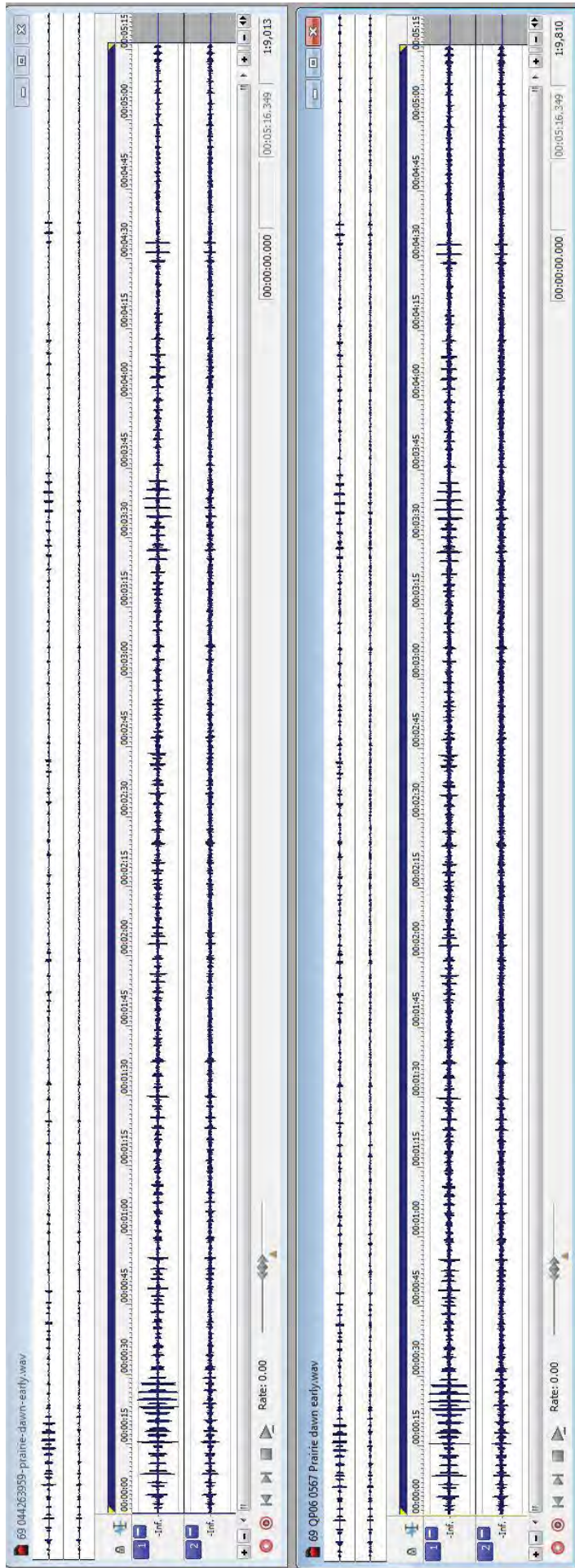


#68

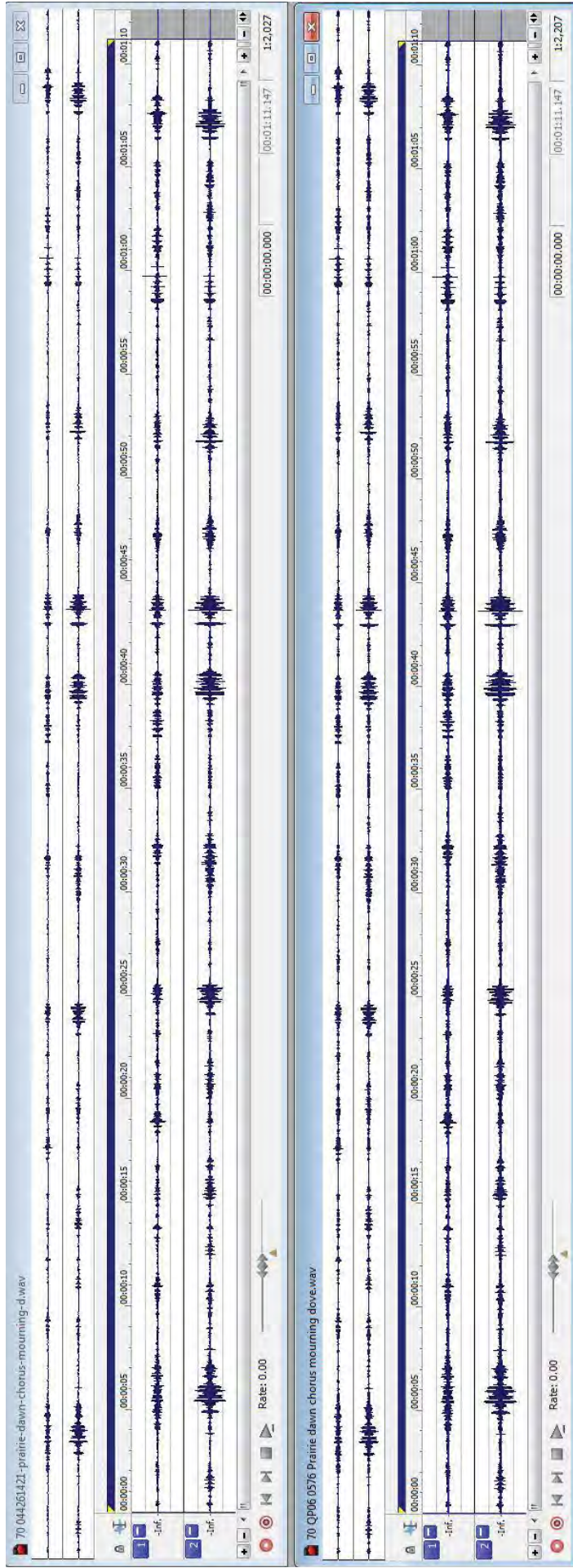


HEMP0000650

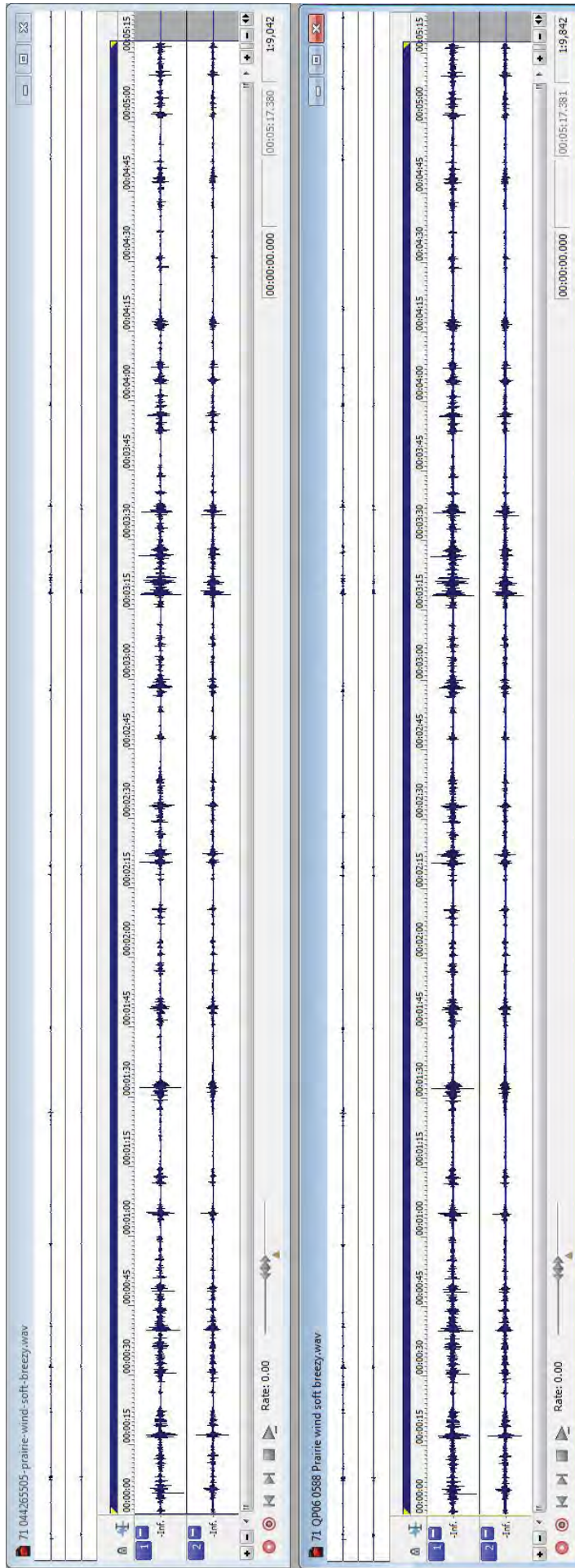
#69



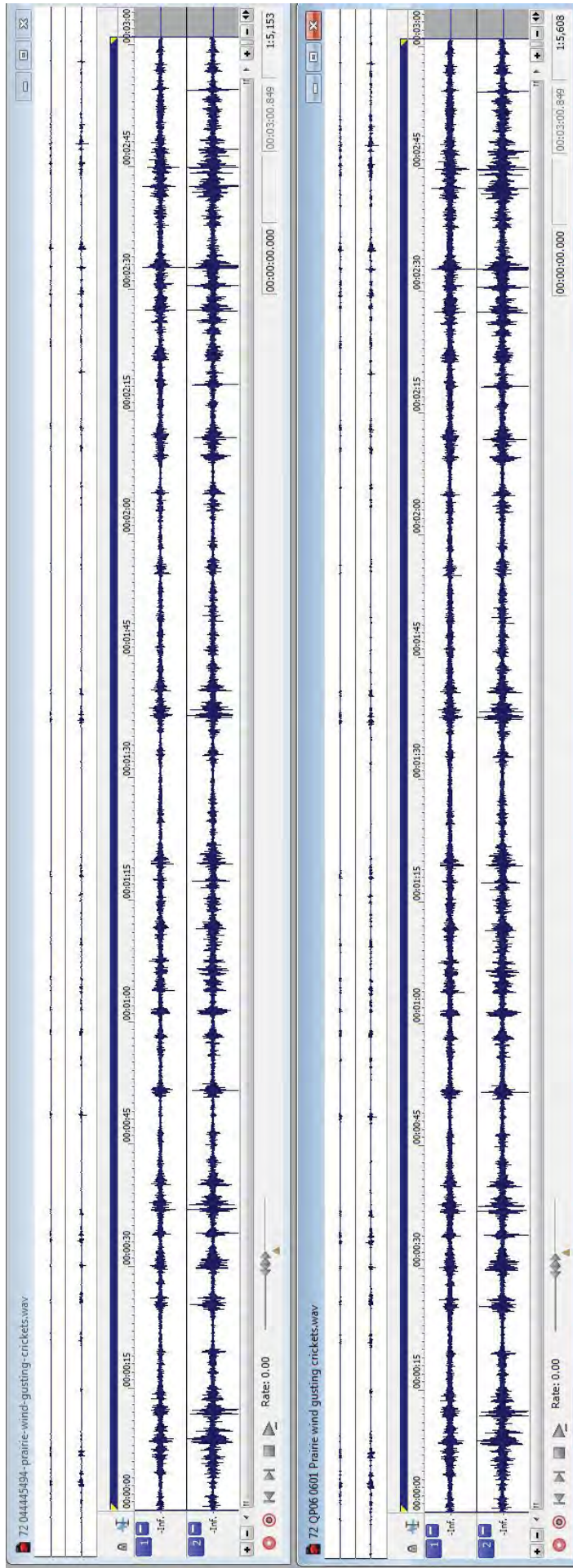
#70



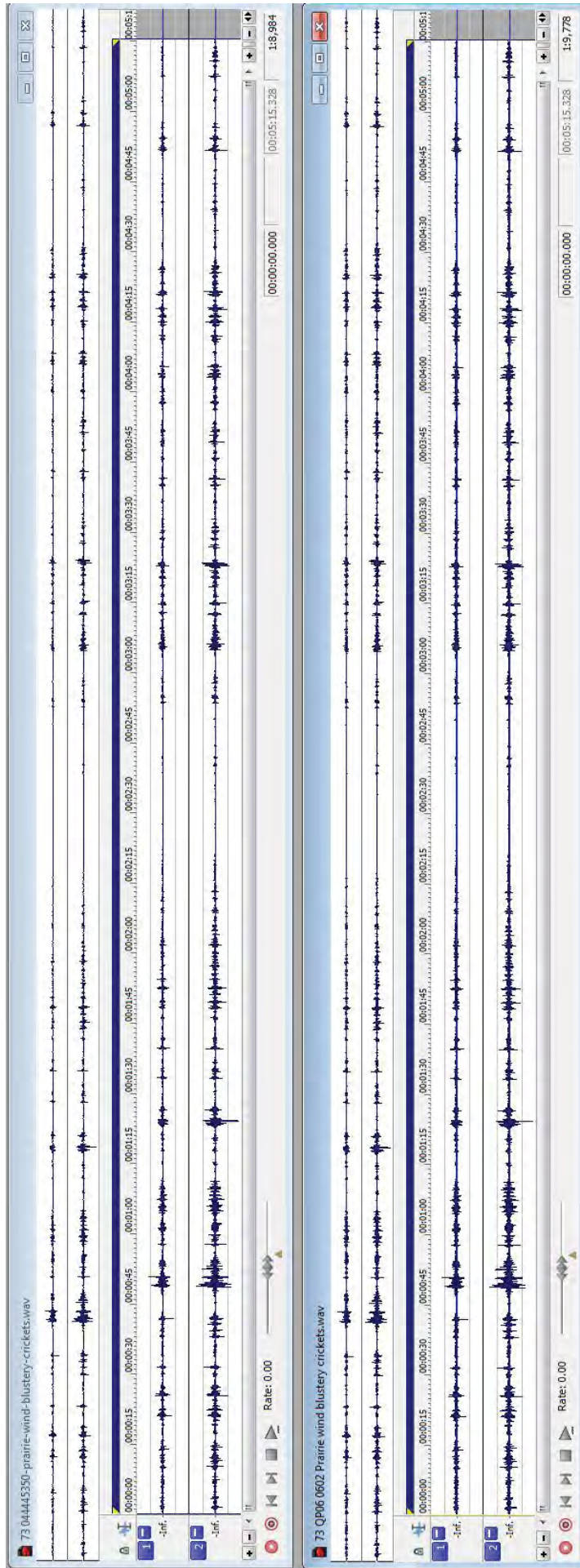
#71



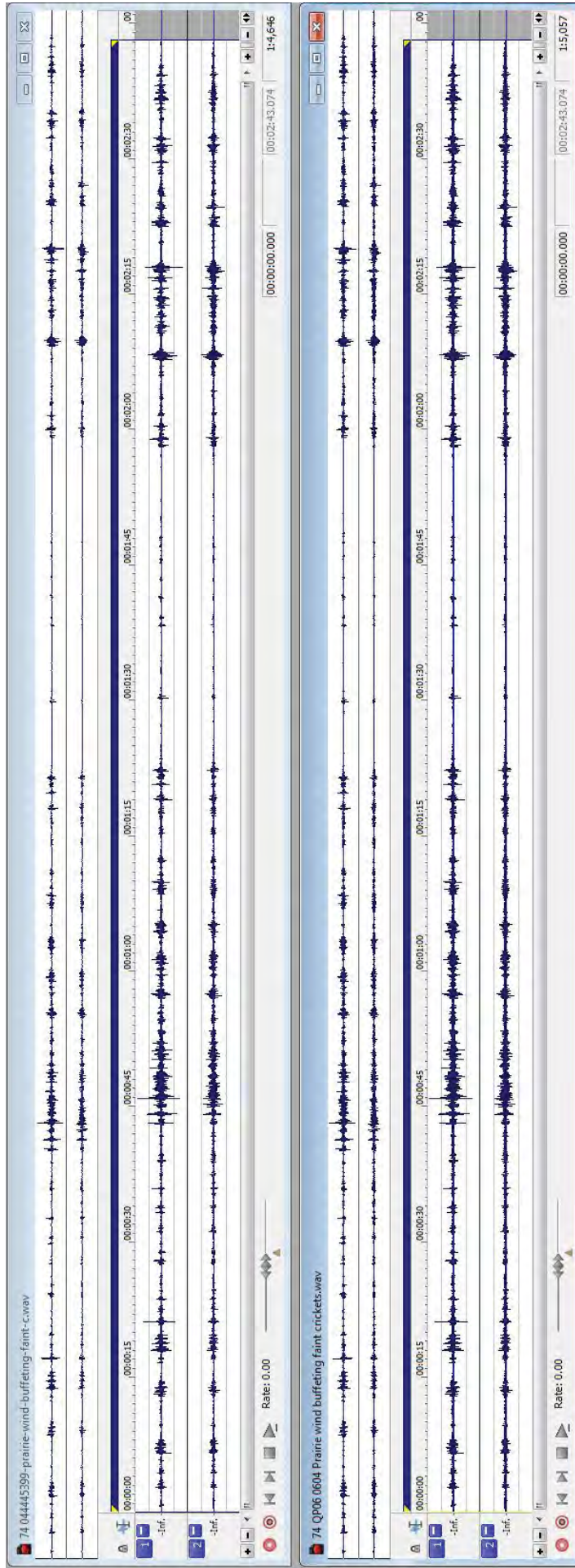
#72



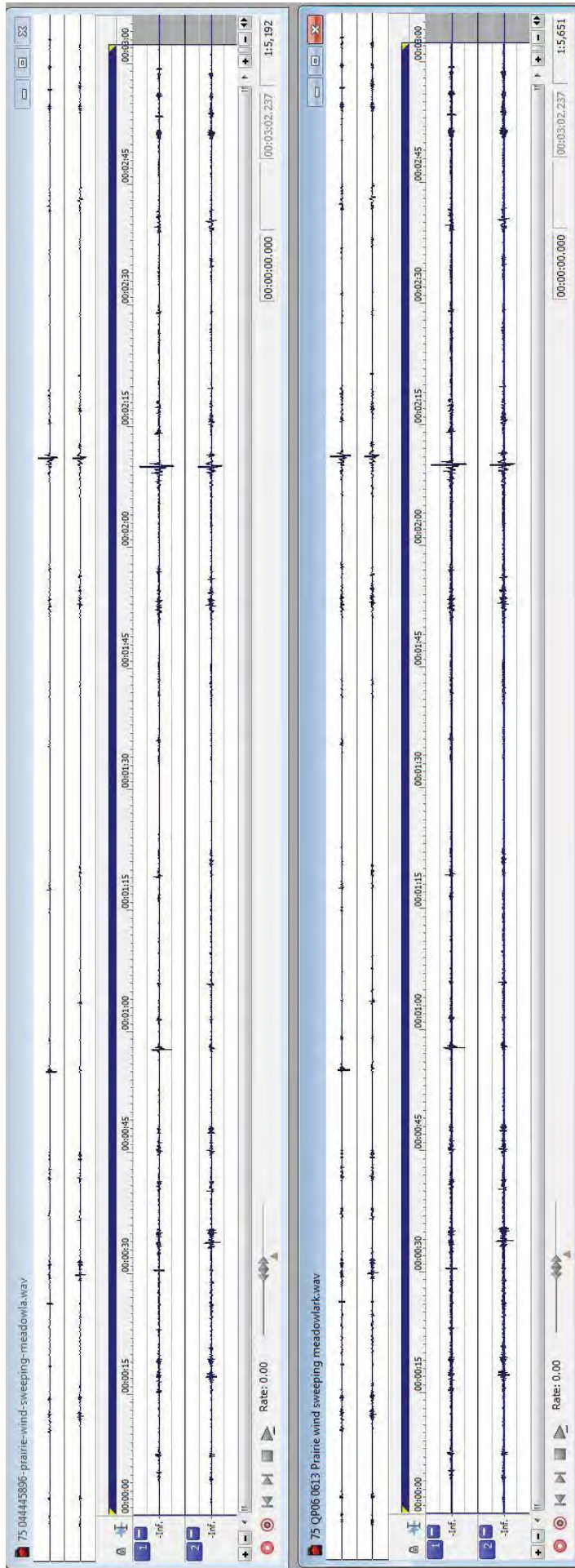
#73



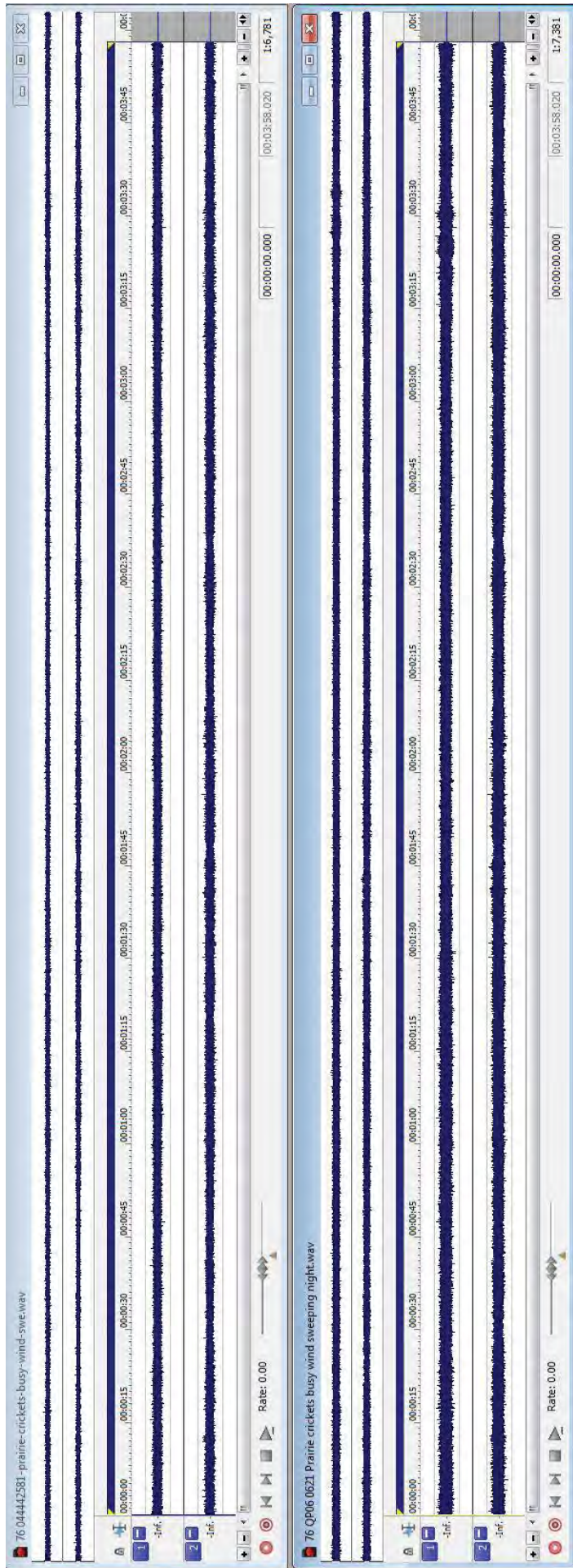
#74



#75

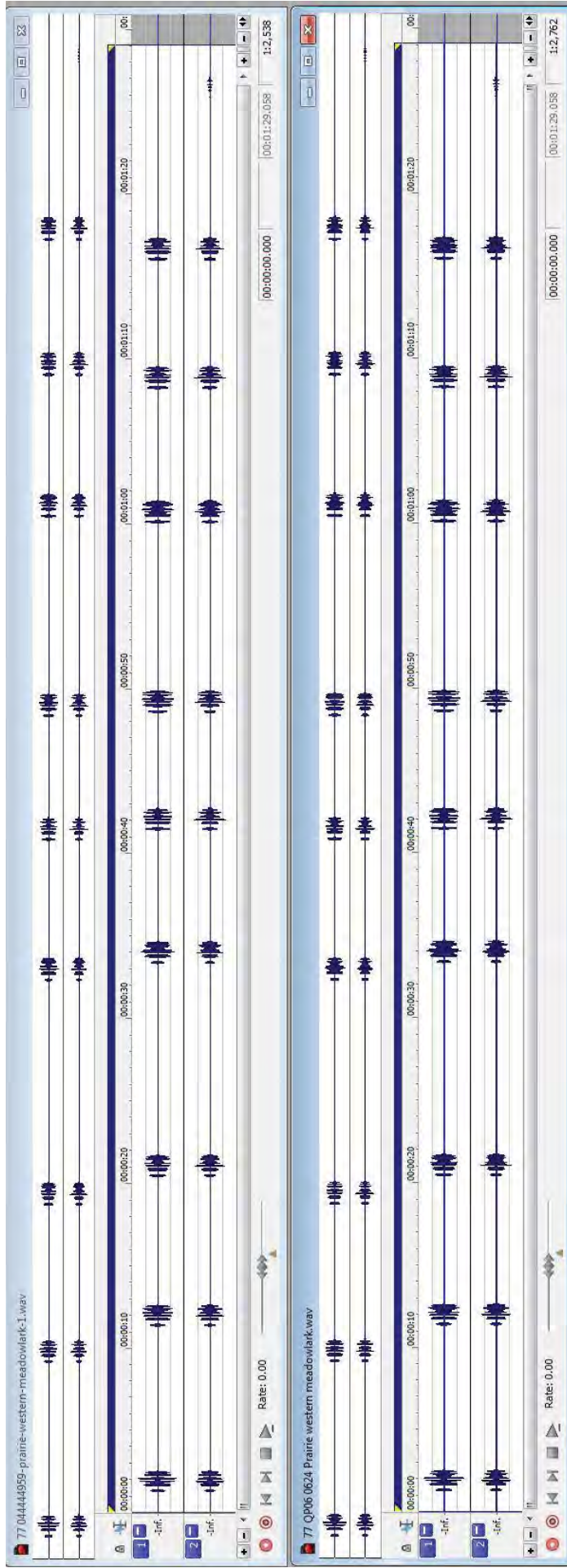


#76



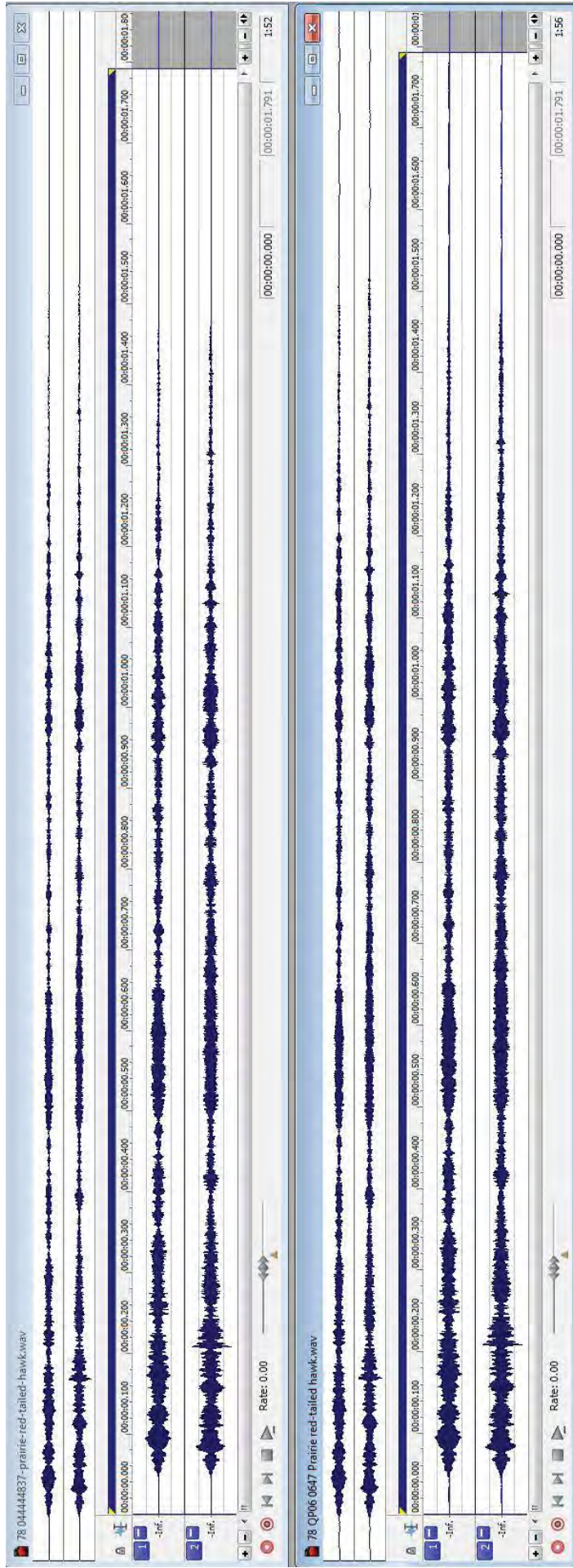
HEMP000658

#77

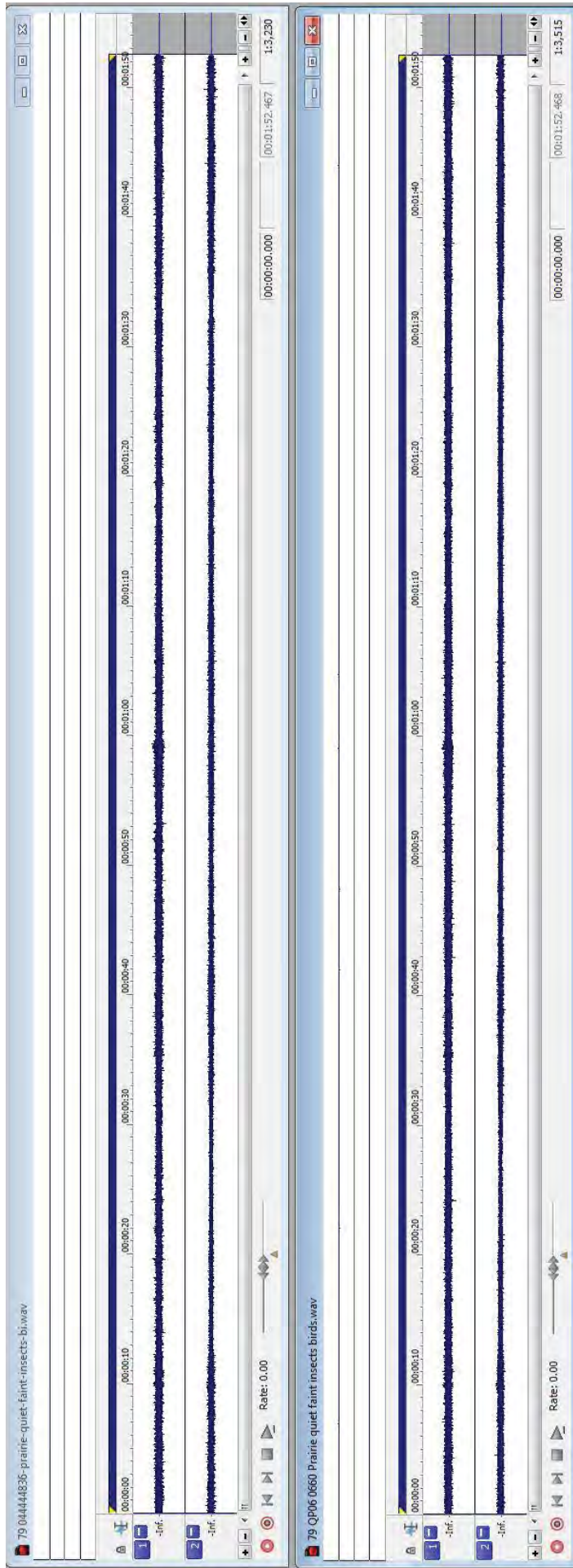


HEMP0000659

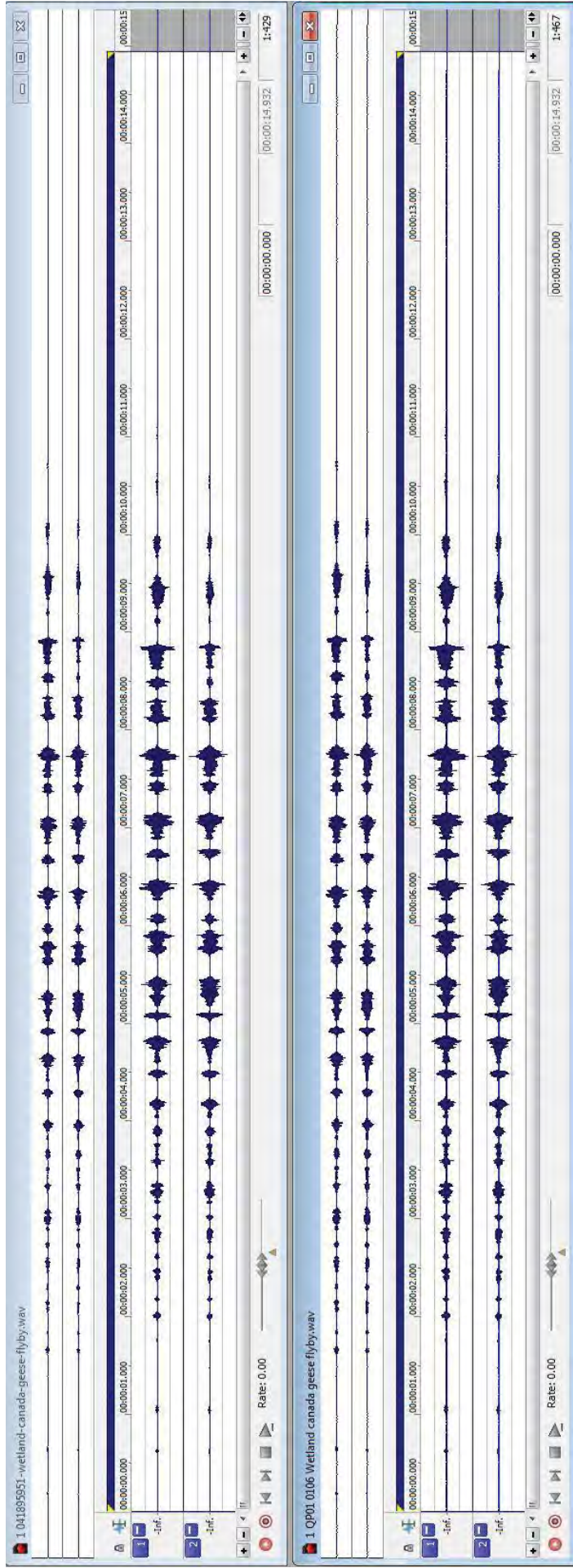
#78



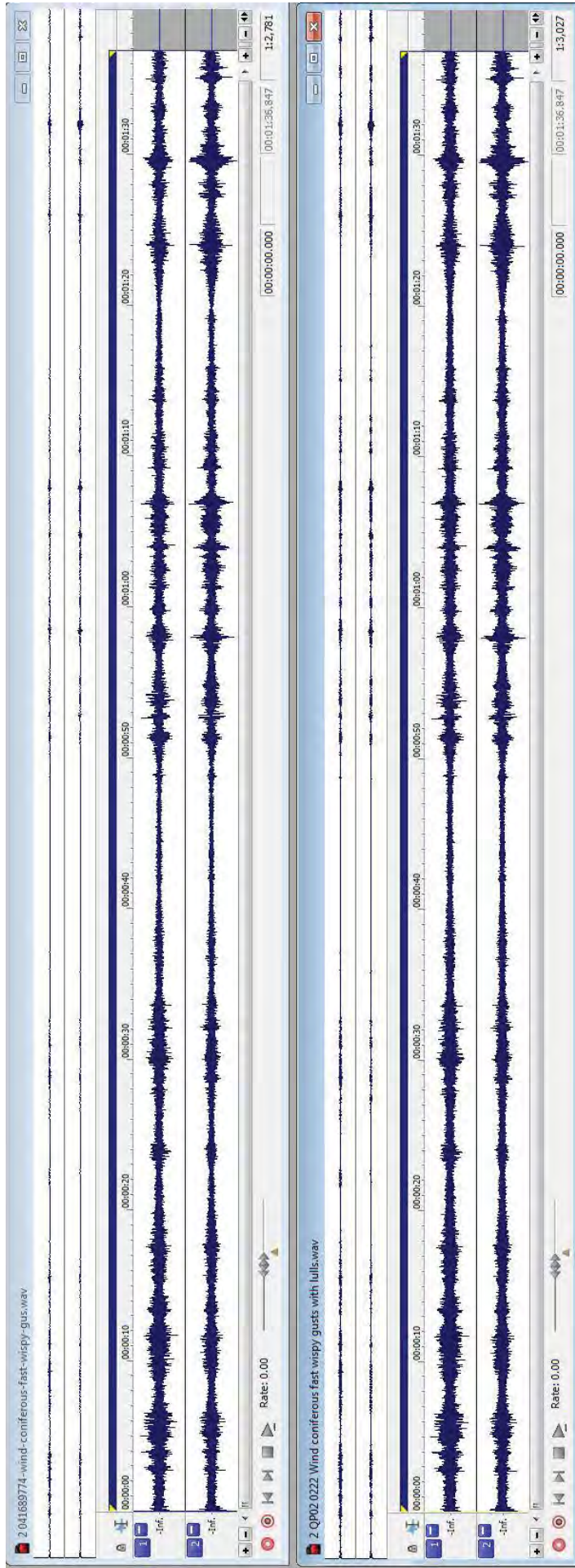
#79



#80

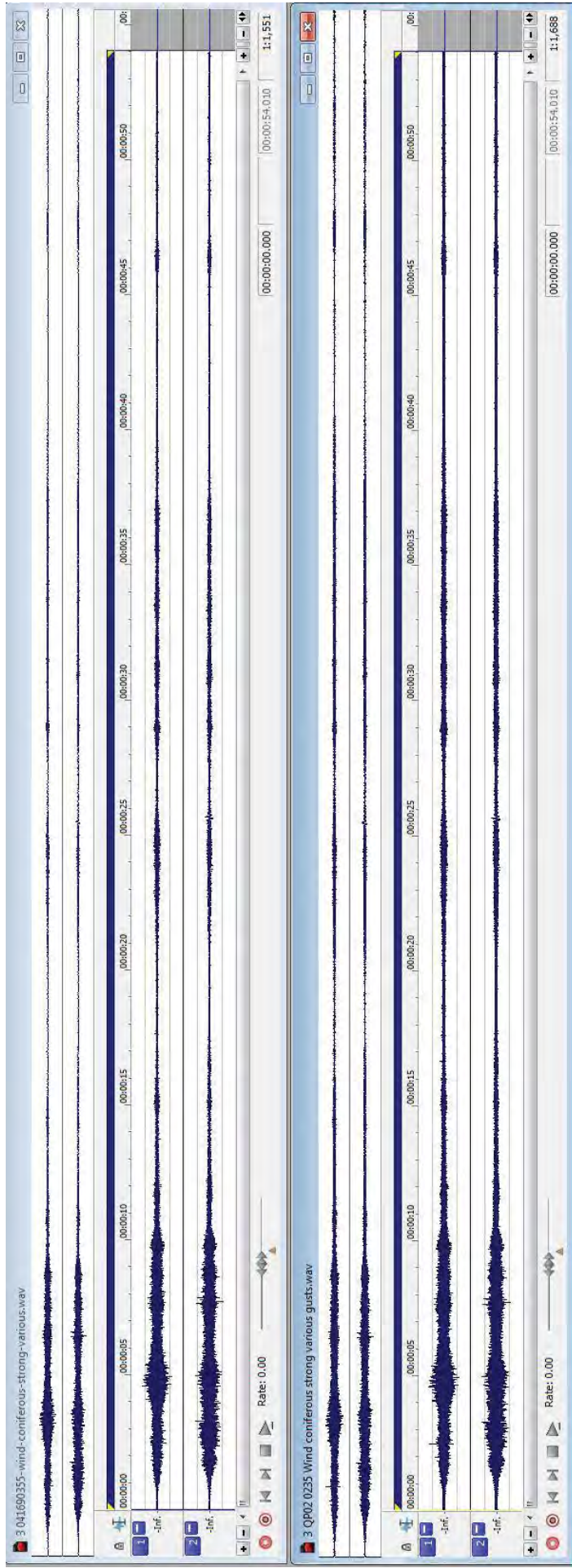


#81

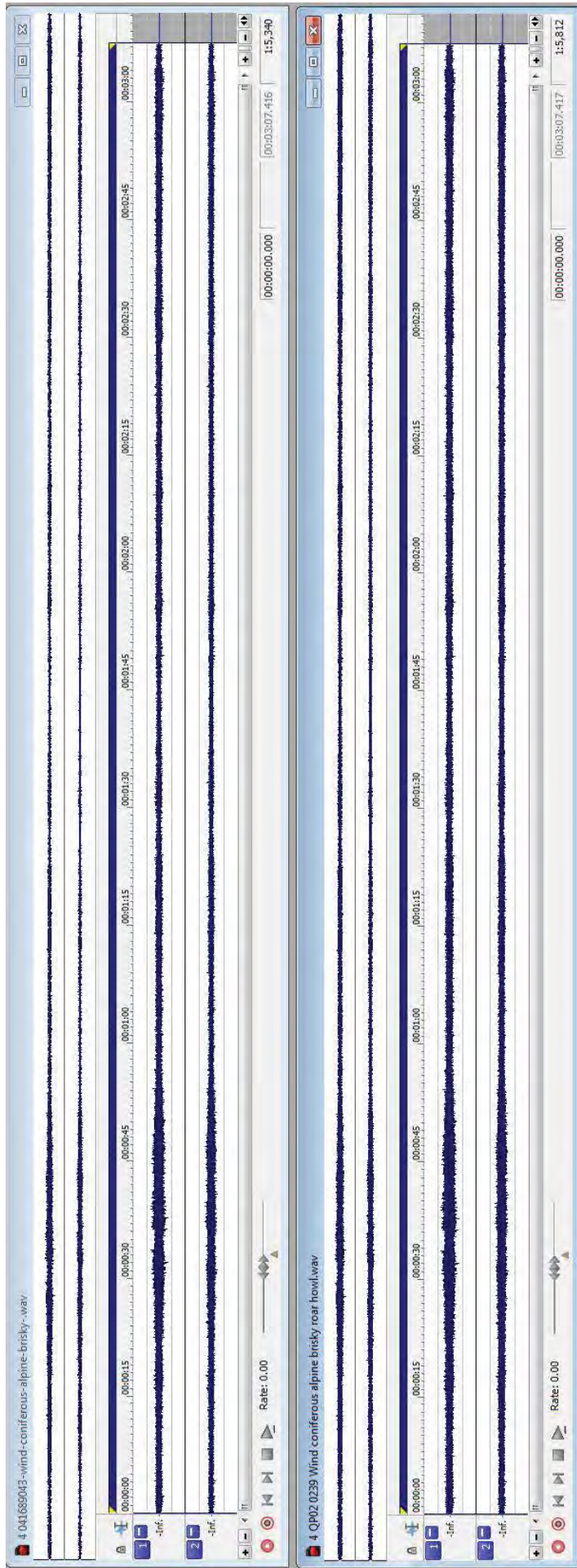


HEMP0000663

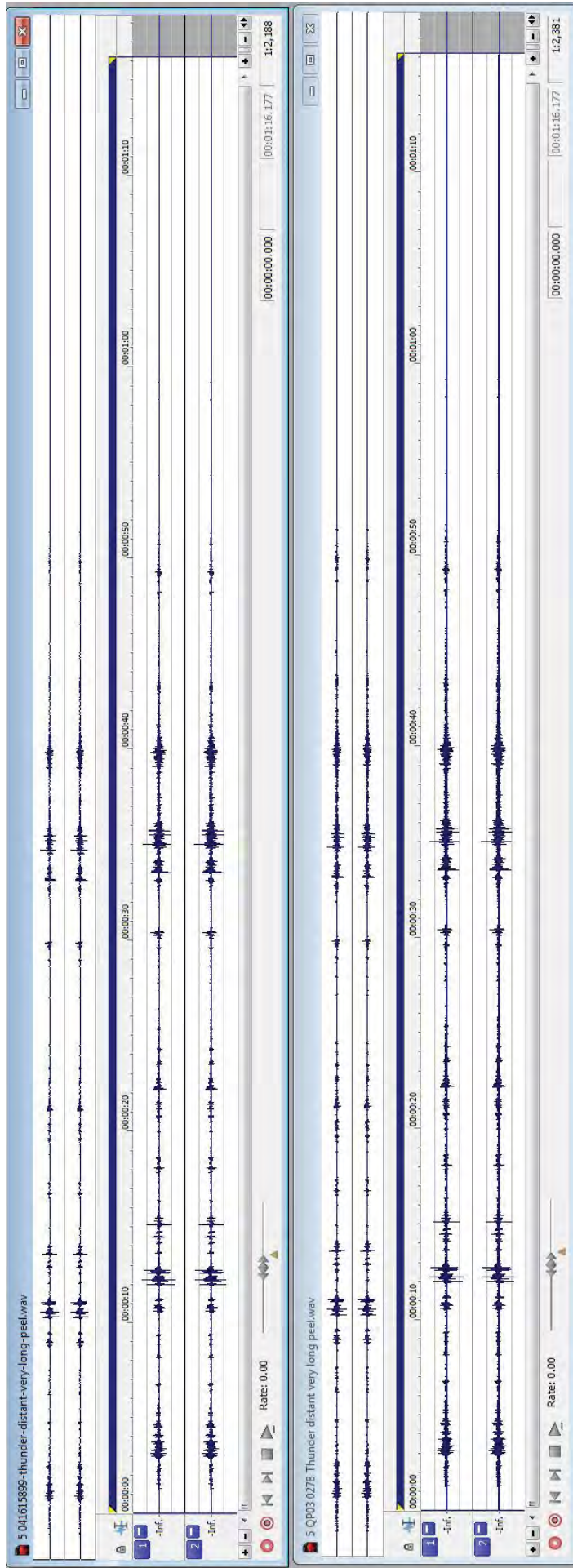
#82



#83

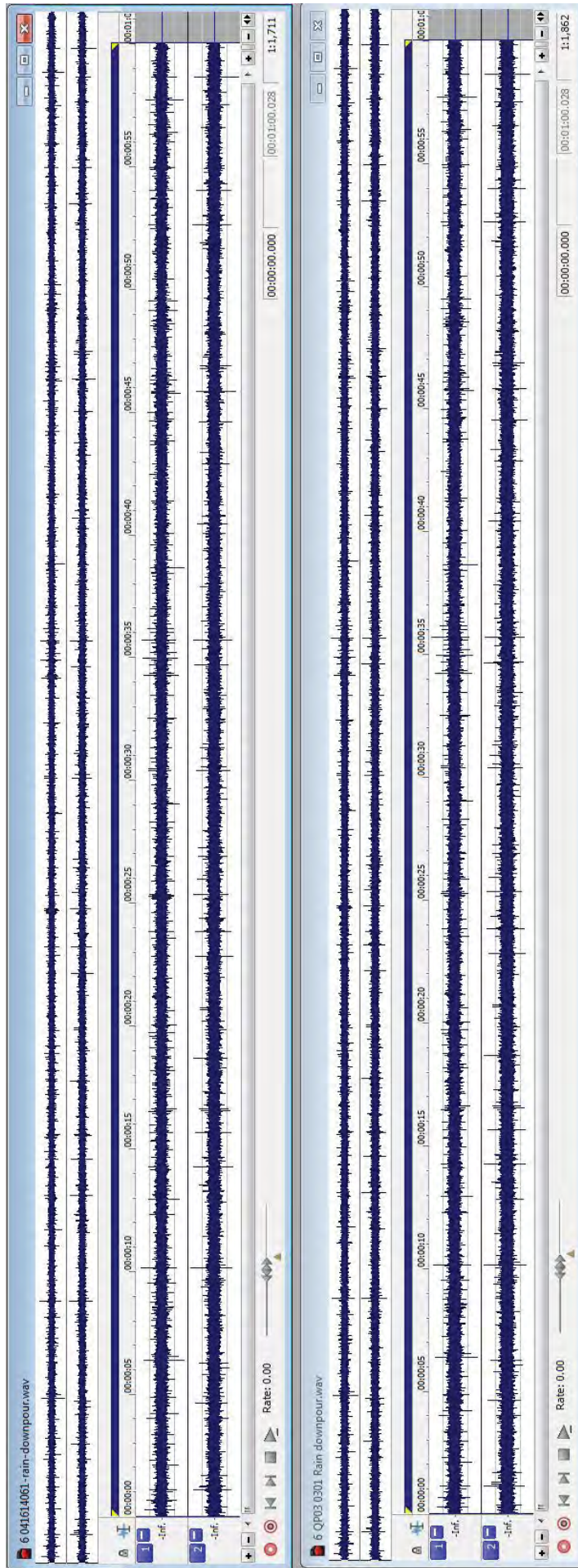


#84



HEMP0000666

#85



HEMP000667

#86

